OM protein - protein search, using sw model

Run on: March 28, 2006, 13:51:05 ; Search time 188 Seconds
(without alignments)
911.477 Million cell updates/sec

Title: US-10-616-088-2
Perfect score: 2024
Sequence: 1 MPDTNSTINLSLSTRVTLAF.....KIFCIKKQPLPSQHSRSVSS 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2024	100.0	390	3	AAB02831	Aab02831 Human G p
2	2024	100.0	390	3	AAY71297	Aay71297 Human orp
3	2024	100.0	390	4	AAB62445	Aab62445 Human GPC
4	2024	100.0	390	4	AAG64477	Aag64477 Human G p
5	2024	100.0	390	4	AAB73622	Aab73622 Human G p
6	2024	100.0	390	5	AAM53050	Aam53050 Human G p
7	2024	100.0	390	5	ABP98629	Abp98629 Human his
8	2024	100.0	390	5	ABB78276	Abb78276 Amino aci
9	2024	100.0	390	5	AAM50564	Aam50564 Human his
10	2024	100.0	390	5	AAG66023	Aag66023 Human his
11	2024	100.0	390	5	AAU74906	Aau74906 Amino aci
12	2024	100.0	390	6	ABG71960	Abg71960 Human G-p
13	2024	100.0	390	6	ABU92265	Abu92265 Human G p
14	2024	100.0	390	6	ABP81727	Abp81727 Human his
15	2024	100.0	390	6	AAE36417	Aae36417 Human H4
16	2024	100.0	390	7	ADG98760	Adg98760 Human orp
17	2024	100.0	390	7	ADJ26923	Adj26923 Human end
18	2024	100.0	390	8	ADG86375	Adg86375 Human end
19	2024	100.0	390	8	ADJ88376	Adj88376 Novel hum
20	2024	100.0	390	8	ADO05720	Ado05720 Human his
21	2024	100.0	390	8	ADO29496	Ado29496 Human GPC
22	2024	100.0	390	8	ADP20168	Adp20168 Human G p
23	2024	100.0	390	8	ADQ75074	Adq75074 Human G p
24	2024	100.0	390	9	ADY86900	Ady86900 Human his
25	2024	100.0	391	5	AAM53052	Aam53052 Human G p
26	2024	100.0	392	5	AAM53053	Aam53053 Human G p
27	2019	99.8	390	8	ADG86522	Adg86522 Human end
28	2008	99.2	390	4	AAM51410	Aam51410 Human GPR
29	2008	99.2	390	6	AAE36416	Aae36416 Human H4
30	1815.5	89.7	357	6	AAE36415	Aae36415 Human H4
31	1671	82.6	336	6	AAE36414	Aae36414 Human H4
32	1433.5	70.8	649	8	ADU82861	Adu82861 Ligand up
33	1413.5	69.8	391	5	AAM50566	Aam50566 Rat hista
34	1377.5	68.1	391	5	AAM50565	Aam50565 Mouse his
35	1377.5	68.1	391	8	ADO29497	Ado29497 Mouse GPC
36	1318.5	65.1	389	5	AAM50567	Aam50567 Guinea pi
37	772	38.1	441	5	AAE23411	Aae23411 Human G-p
38	730	36.1	415	7	AAO29530	Aao29530 Human H3
39	730	36.1	445	6	ABR43668	Abr43668 Monkey hi
40	730	36.1	445	6	ABP57426	Abp57426 Monkey hi
41	730	36.1	445	8	ADP76111	Adp76111 Monkey H3
42	729	36.0	445	2	AAY06323	Aay06323 Rat G pro
43	729	36.0	445	2	AAG67831	Aag67831 Rat musca
44	729	36.0	445	3	AAB15382	Aab15382 Rat G-pro
45	729	36.0	445	6	ABR43669	Abr43669 Rat hista

ALIGNMENTS

RESULT 1
AAB02831
ID AAB02831 standard; protein; 390 AA.
XX
AC AAB02831;
XX
DT 22-AUG-2000 (first entry)
XX
DE Human G protein coupled receptor hRUP7 protein SEQ ID NO:14.
XX
KW Human; G protein coupled receptor; GPCR; transmembrane receptor;
KW identification; agonist; screening; therapeutic; pharmaceutical; mutant.
XX
OS Homo sapiens.
XX
PN WO200022131-A2.
XX
PD 20-APR-2000.
XX
PF 13-OCT-1999; 99WO-US024065.
XX
PR 13-OCT-1998; 98US-00170496.
PR 12-NOV-1998; 98US-0108029P.
PR 20-NOV-1998; 98US-0109213P.
PR 27-NOV-1998; 98US-0110060P.
PR 16-FEB-1999; 99US-0120416P.
PR 26-FEB-1999; 99US-0121852P.
PR 12-MAR-1999; 99US-0123944P.
PR 12-MAR-1999; 99US-0123945P.
PR 12-MAR-1999; 99US-0123946P.
PR 12-MAR-1999; 99US-0123948P.
PR 12-MAR-1999; 99US-0123949P.
PR 12-MAR-1999; 99US-0123951P.
PR 28-MAY-1999; 99US-0136436P.
PR 28-MAY-1999; 99US-0136437P.
PR 28-MAY-1999; 99US-0136439P.
PR 28-MAY-1999; 99US-0137127P.
PR 28-MAY-1999; 99US-0137131P.
PR 28-MAY-1999; 99US-0137567P.
PR 29-JUN-1999; 99US-0141448P.
PR 27-AUG-1999; 99US-0151114P.
PR 03-SEP-1999; 99US-0152524P.
PR 29-SEP-1999; 99US-0156555P.
PR 29-SEP-1999; 99US-0156633P.
PR 29-SEP-1999; 99US-0156634P.
PR 29-SEP-1999; 99US-0156653P.
PR 01-OCT-1999; 99US-0157280P.

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PR   01-OCT-1999;   99US-0157281P.
PR   01-OCT-1999;   99US-0157282P.
PR   01-OCT-1999;   99US-0157293P.
PR   01-OCT-1999;   99US-0157294P.
PR   12-OCT-1999;   99US-00416760.
PR   12-OCT-1999;   99US-00417044.
XX
PA   (AREN-) ARENA PHARM INC.
XX
PI   Behan DP,  Lehmann-Bruinsma K,  Chalmers DT,  Chen R,  Dang HT;
PI   Gore M,  Liaw CW,  Lin I,  Lowitz K,  White C;
XX
DR   WPI; 2000-317986/27.
DR   N-PSDB; AAA46023.
XX
PT   Non-endogenous, human G protein-coupled receptors for screening receptor,
PT   inverse or partial agonists useful as therapeutic agents.
XX
PS   Example 1; Page 89-90; 187pp; English.
XX
CC   The present invention describes transmembrane receptors, preferably human
CC   G protein coupled receptors (GPCR), for which the endogenous ligand is
CC   unknown (orphan GPCR receptors). More specifically the present invention
CC   relates to non-endogenous, constitutively activated versions of a human
CC   GPCR. These non-endogenous human GPCRs can be useful for the direct
CC   identification of candidate compounds as receptors agonists, inverse
CC   agonists or partial agonists for use as pharmaceutical agents. AAA46017
CC   to AAA46126 and AAB02825 to AAB02859 represent sequences used in the
CC   exemplification of the present invention
XX
SQ   Sequence 390 AA;

  Query Match             100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 2
AAY71297
ID   AAY71297 standard; protein; 390 AA.
XX
AC   AAY71297;
XX
DT   02-NOV-2000  (first entry)
XX
DE   Human orphan G protein-coupled receptor hRUP7.
XX
KW   Human; orphan G protein-coupled receptor; GPCR; hRUP7; drug screening;
KW   transmembrane receptor; signal cascade.
XX
OS   Homo sapiens.
XX
PN   WO200031258-A2.
XX
PD   02-JUN-2000.
XX
PF   13-OCT-1999;   99WO-US023687.
XX
PR   20-NOV-1998;   98US-0109213P.
PR   16-FEB-1999;   99US-0120416P.
PR   26-FEB-1999;   99US-0121852P.
PR   12-MAR-1999;   99US-0123946P.
PR   12-MAR-1999;   99US-0123949P.
PR   28-MAY-1999;   99US-0136436P.
PR   28-MAY-1999;   99US-0136437P.
PR   28-MAY-1999;   99US-0136439P.
PR   28-MAY-1999;   99US-0136567P.
PR   28-MAY-1999;   99US-0137127P.
PR   28-MAY-1999;   99US-0137131P.
PR   29-JUN-1999;   99US-0141448P.
PR   29-SEP-1999;   99US-0156555P.
PR   29-SEP-1999;   99US-0156633P.
PR   29-SEP-1999;   99US-0156634P.
PR   29-SEP-1999;   99US-0156653P.
PR   01-OCT-1999;   99US-0157280P.
PR   01-OCT-1999;   99US-0157281P.
PR   01-OCT-1999;   99US-0157282P.
PR   01-OCT-1999;   99US-0157293P.
PR   01-OCT-1999;   99US-0157294P.
PR   12-OCT-1999;   99US-00416760.
PR   12-OCT-1999;   99US-00417044.
XX
PA   (AREN-) ARENA PHARM INC.
XX
PI   Chen R,  Dang HT,  Liaw CW,  Lin I;
XX
DR   WPI; 2000-400068/34.
DR   N-PSDB; AAD01124.
XX
PT   Novel human orphan G protein-coupled receptors and the encoding cDNAs for
PT   use in the identification of G protein-coupled receptor agonists.
XX
PS   Claim 26; Page 60-61; 102pp; English.
XX
CC   The present amino acid sequence is the hRUP7, an endogenous human orphan
CC   G protein-coupled receptor (GPCR). The full length hRUP7 cDNA was cloned
CC   by RT-PCR using human peripheral leucocyte cDNA as template. The orphan
CC   GPCR of the invention, like all GPCRs has seven transmembrane alpha
CC   helices with an extracellular N-terminus and an intracellular C-terminus.
CC   However, no endogenous ligands has yet been identified for the proteins
CC   of the invention. The orphan GPCRs may be used in the identification of
CC   their endogenous ligands, and to screen potential GPCR agonists and
CC   antagonists for use as pharmaceutical agents. The proteins may also be
CC   used in the study of GPCR-mediated signalling cascades, and to elucidate
CC   their precise role in normal and diseased human conditions. Nucleic acid
CC   encoding human orphan GPCRs may be used for tissue localisation
CC   expression analysis to provide information about their function in
CC   healthy and pathological states
XX
SQ   Sequence 390 AA;

  Query Match             100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
```

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Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 3
AAB62445
ID AAB62445 standard; protein; 390 AA.
XX
AC AAB62445;
XX
DT 09-JUL-2001 (first entry)
XX
DE Human GPCR-like polypeptide, PFI-013.
XX
KW G-protein coupled receptor; GPCR; PFI-013; antiallergic; antiasthmatic;
KW antiinflammatory; vasotropic; antidiabetic; anorectic; cytostatic; human;
KW osteopathic; neuroprotective; nootropic; dermatological; gynecological;
KW signal transduction.
XX
OS Homo sapiens.
XX
PN EP1096009-A1.
XX
PD 02-MAY-2001.
XX
PF 24-OCT-2000; 2000EP-00309364.
XX
PR 29-OCT-1999; 99GB-00025641.
PR 20-APR-2000; 2000GB-00009973.
XX
PA (PFIZ) PFIZER LTD.
PA (PFIZ) PFIZER INC.
XX
PI Peter B, O'reilly MA;
XX
DR WPI; 2001-309854/33.
DR N-PSDB; AAF83203.
XX
PT New G-protein coupled receptor-like polypeptide, polynucleotide for
PT screening drug candidates for treating diseases associated with signal
PT transduction e.g. allergic, inflammatory, pulmonary, neoplastic diseases.
XX
PS Claim 22; Page 44; 66pp; English.
XX
CC This is a human G-protein coupled receptor (GPCR)-like polypeptide, PFI-
CC 013, encoded by cDNA of NCIMB 41073. The PFI-013 protein can be expressed
CC by standard recombinant methodology. Antibodies and modulators of PFI-013
CC are useful in the manufacture of a medicament for treating allergic
CC disorder, including extrinsic asthma, immunological disorders, such as
CC intrinsic asthma, vasculitic granulomatous disease, interstitial and
CC other pulmonary disease, including chronic obstructive pulmonary disease
CC (COPD), infectious, inflammatory disease, such as inflammatory bowel
CC disease and neoplastic and myeloproliferative diseases. They are also
CC useful for treating obesity, diabetes, metabolic, neurological diseases,
CC psychotherapeutics, urogenital disease, reproduction and sexual medicine,
CC inflammation, cancer, tissue repair, dermatology, photoageing, skin
CC pigmentation, osteoporosis, cardiovascular, gastrointestinal diseases,
CC allergy and respiratory disease, sensory organ disorders, sleep disorders
CC and hair loss. The PFI-013 protein and nucleic acid are useful in the
CC diagnosis and treatment of the above conditions and also for screening
CC drug candidates for the treatment of diseases associated with signal
CC transduction. The antibodies are also useful for enrichment of
CC eosinophils from mammalian, especially human blood and for detecting the
CC protein in biological samples
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 4; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 4
AAG64477
ID AAG64477 standard; protein; 390 AA.
XX
AC AAG64477;
XX
DT 25-SEP-2001 (first entry)
XX
DE Human G protein-coupled receptor protein BG26.
XX
KW Human; G protein-coupled receptor protein BG26; histamine H3; histamine;
KW altering intracellular cAMP concentration;
KW regulating signal transduction.
XX
OS Homo sapiens.
XX
PN WO200146414-A1.
XX
PD 28-JUN-2001.
XX
PF 20-DEC-2000; 2000WO-JP009038.
XX
PR 20-DEC-1999; 99JP-00361687.
XX

PA (BANY) BANYU PHARM CO LTD.
XX
PI Itadani H, Nakamura T, Tanaka K, Ohta M;
XX
DR WPI; 2001-441675/47.
DR N-PSDB; AAH47911.
XX
PT G protein-coupled receptor protein BG26, with activity of binding to
PT histamine and capable of changing intracellular cAMP concentration in
PT response to its stimulus, applicable as tool in screening ligands or drug
PT candidates.
XX
PS Claim 1; Page 41-44; 50pp; Japanese.
XX
CC The present sequence is that of the human G protein-coupled receptor
CC protein BG26, which shows significant homology with histamine H3, with
CC activity of binding to histamine and capable of changing intracellular
CC cAMP concentration in response to its stimulus. The protein is applicable
CC as a tool in screening ligands or drug candidates for regulating signal
CC transduction from such protein and treating diseases associated with its
CC abnormality
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 4; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
Db 1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy 61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
Db 61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy 121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
Db 121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy 181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
Db 181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy 241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
Db 241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy 301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
Db 301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy 361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
Db 361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390

RESULT 5
AAB73622
ID AAB73622 standard; protein; 390 AA.
XX
AC AAB73622;
XX
DT 10-AUG-2001 (first entry)
XX
DE Human G protein-coupled receptor AXOR35.
XX
KW AXOR35; human; G protein-coupled receptor; 7TM receptor;
KW histamine H3 receptor homologue; infection; viral; bacterial; fungal;
KW protozoan; HIV-1; HIV-2; pain; cancer; diabetes; obesity; anorexia;
KW bulimia; osteoporosis; asthma; allergy; urinary retention;
KW acute heart failure; hypotension; hypertension; angina pectoris;
KW myocardial infarction; stroke; ulcer; migraine; vomiting;
KW psychotic disorder; neurological disorder; anxiety; schizophrenia;
KW manic depression; bipolar disorder; depression; delirium; dementia;
KW severe mental retardation; dyskinesia; Parkinson's disease;
KW Huntington's disease; Gilles de la Tourette's syndrome; lymphocyte;
KW macrophage; eosinophil; neutrophil; function modulation;
KW autoimmune disorder; pulmonary disorder; gene therapy; vaccine;
KW drug screening; signal transduction; transgenic animal; drug discovery.
XX
OS Homo sapiens.
XX
PN WO200133221-A1.
XX
PD 10-MAY-2001.
XX
PF 26-OCT-2000; 2000WO-US029461.
XX
PR 02-NOV-1999; 99US-00431898.
PR 03-FEB-2000; 2000US-00497790.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
PI Aubart KM, Bergsma DJ, Fitzgerald LR, Graybill TL, Li X;
PI Michalovich D, Morrow DM, Zhu Y;
XX
DR WPI; 2001-316464/33.
DR N-PSDB; AAH24007.
XX
PT Novel G-protein coupled receptor polypeptide and polynucleotide for
PT treating cancer, autoimmune, pulmonary, cardiovascular and neurological
PT disorders and for identifying modulators useful for treating asthma.
XX
PS Claim 1; Page 50-51; 54pp; English.
XX
CC The invention relates to the human G protein-coupled receptor AXOR35
CC (AAB73621), to cDNA encoding AXOR35 (AAH24006), and to AXOR35 fragments
CC and variants. Like all G protein-coupled receptors, AXOR35 has 7 putative
CC transmembrane domains and is involved in signal transduction. AXOR35 has
CC homology and structural similarity with G protein-coupled receptors such
CC as the human histamine H3 receptor. The invention also relates to
CC expression vectors and host cells comprising AXOR35 DNA, to recombinant
CC expression of AXOR35, and to an AXOR35-specific antibody. AXOR35 proteins
CC and nucleotides may be used to treat a wide variety of disorders
CC including bacterial, fungal, protozoal and viral infections, particularly
CC HIV-1 or HIV-2 infections; pain; cancers; benign prostatic hypertrophy;
CC diabetes; obesity; anorexia; bulimia; osteoporosis; asthma; allergies;
CC urinary retention; acute heart failure; hypotension; hypertension; angina
CC pectoris; myocardial infarction; stroke; ulcers; migraine; vomiting;
CC psychotic and neurological disorders such as anxiety, schizophrenia,
CC manic depression, depression, delirium, dementia, and severe mental
CC retardation, and dyskinesias, such as Parkinson's disease, Huntington's
CC disease or Gilles de la Tourette's syndrome. AXOR35 proteins and
CC nucleotides are useful as vaccines, and AXOR35 proteins, nucleotides and
CC antibodies may be used in screening compounds for their ability to
CC modulate AXOR35 activity or expression. Such AXOR35 modulators are
CC particularly useful for treating asthma, and inhibiting or promoting the
CC function of lymphocytes, macrophages, eosinophils or neutrophils in
CC asthmatic lung. AXOR35 proteins, nucleotides and antibodies are also
CC useful for diagnosing or determining susceptibility of an individual to a
CC disease via the detection of abnormal levels of protein or mRNA, or via
CC the detection of mutations in the corresponding gene. AXOR35 proteins are
CC also useful for inducing an immunological response in a mammal against
CC the above diseases, and for antibody production. AXOR35 nucleotides are
CC also useful as diagnostic reagents, in chromosome localisation and tissue
CC expression studies, and for producing transgenic animals useful in drug
CC discovery. AXOR35-specific antibodies are useful for purifying the AXOR35
CC protein or fragments thereof, and are also useful for treating conditions
CC associated with the expression of the AXOR35 protein. The present
CC sequence represents human AXOR35
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 4; Length 390;

```
  Best Local Similarity   100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 6
AAM53050
ID   AAM53050 standard; protein; 390 AA.
XX
AC   AAM53050;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Human G protein-coupled receptor nGPCR-2067.
XX
KW   Human; nGPCR-2067; G protein-coupled receptor; 7TM receptor;
KW   signal transduction; mental disorder; central nervous system disease;
KW   metabolic disease; infection; HIV-1; HIV-2; pain; neurological disorder;
KW   psychotic disorder; Huntington's disease; schizophrenia; migraine;
KW   depression; anxiety; bipolar disorder; dementia; Alzheimer's disease;
KW   Parkinson's disease; proliferative disorder; cancer; psoriasis;
KW   benign prostatic hypertrophy; diabetes; dyslipidaemia; obesity; anorexia;
KW   thyroid disorder; cardiovascular disease; hypotension; hypertension;
KW   thrombosis; myocardial infarction; cardiomyopathy; atherosclerosis;
KW   inflammatory conditions; autoimmune disorder; rheumatoid arthritis;
KW   hormonal disorder; renal failure; anti-HIV; analgesic; cytostatic;
KW   antidiabetic; metabolic; hypertensive; hypotensive; thrombolytic;
KW   cardiant; antiatherosclerotic; neuroleptic; antimigraine;
KW   antiparkinsonian; tranquiliser; antidepressant; neuroprotective;
KW   anticonvulsant; antiinflammatory; antirheumatic; antiarthritic;
KW   antipsoriatic; gene therapy; receptor.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          19. .41
FT                   /label= Transmembrane_domain_1
FT   Domain          52. .74
FT                   /label= Transmembrane_domain_2
FT   Domain          86. .110
FT                   /label= Transmembrane_domain_3
FT   Domain          128. .146
FT                   /label= Transmembrane_domain_4
FT   Domain          172. .194
FT                   /label= Transmembrane_domain_5
FT   Domain          305. .326
FT                   /label= Transmembrane_domain_6
FT   Domain          342. .360
FT                   /label= Transmembrane_domain_7
XX
PN   WO200185793-A2.
XX
PD   15-NOV-2001.
XX
PF   08-MAY-2001; 2001WO-US014750.
XX
PR   08-MAY-2000; 2000US-0203108P.
XX
PA   (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI   Lind P,  Sejlitz T,  Vogeli G,  Wood LS;
XX
DR   WPI; 2002-062240/08.
DR   N-PSDB; ABA02496.
XX
PT   New polynucleotide, useful for identifying modulator compounds which are
PT   used for treating psoriasis, schizophrenia, diabetes, encodes the novel G
PT   protein-coupled receptor (nGPCR) polypeptide (nGPCR-2067).
XX
PS   Claim 31; Page 63; 100pp; English.
XX
CC   This sequence represents a novel human G protein-coupled receptor (GPCR)
CC   designated nGPCR-2067. Like all GPCRs, nGPCR-2067 has 7 putative
CC   transmembrane domains and is involved in signal transduction. The
CC   invention also relates to expression vectors and host cells comprising
CC   nucleic acids encoding nGPCR-2067, to recombinant expression of nGPCR-
CC   2067, to antibodies specific for nGPCR-2067, to drug screening methods
CC   that use nGPCR-2067, and to modulators of nGPCR-2067 activity. nGPCR-2067
CC   nucleic acid sequences may be used to isolate nGPCR-2067 allelic variants
CC   and species homologues and may also be used in genetic mapping. The
CC   invention also discloses the use of nGPCR-2067 nucleic acids in screening
CC   for a predisposition to nGPCR-2067-associated hereditary mental
CC   disorders, or for the diagnosis of these disorders. nGPCR-2067 nucleic
CC   acids may additionally be used to generate transgenic animals, including
CC   knockout animals, which may provide an insight into treating a variety of
CC   human disorders, and may also be used in the design of antisense
CC   molecules for suppressing expression of nGPCR-2067 in cells. nGPCR-2067,
CC   and nGPCR-2067 modulators may be used to treat a wide variety of medical
CC   conditions, particularly mental disorders, central nervous system
CC   diseases, and metabolic diseases. Diseases that may be treated include
CC   viral infections, particularly HIV-1 or HIV-2 infections; pain; central
CC   nervous system, neurological and psychotic disorders such as Huntington's
CC   disease, schizophrenia, migraine, depression, anxiety, bipolar disorder,
CC   dementia, Alzheimer's disease, and Parkinson's disease; proliferative
CC   disorders such as cancers, benign prostatic hypertrophy and psoriasis;
CC   metabolic disorders such as diabetes, dyslipidaemia, obesity, and
CC   anorexia; thyroid disorders; cardiovascular diseases such as hypotension,
CC   hypertension, thrombosis, myocardial infarction, cardiomyopathies, and
CC   atherosclerosis; inflammatory conditions; autoimmune disorders (e.g.,
CC   rheumatoid arthritis); hormonal disorders; and renal failure
XX
SQ   Sequence 390 AA;

  Query Match             100.0%;  Score 2024;  DB 5;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
```

```
Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 7
ABP98629
ID ABP98629 standard; protein; 390 AA.
XX
AC ABP98629;
XX
DT 13-JUN-2003 (first entry)
XX
DE Human histamine receptor SP9144.
XX
KW human; histamine receptor; chromosome 18; anti-inflammatory;
KW anti-asthmatic; anti-allergic; dermatological; cerebroprotective; stroke;
KW anti-migraine; cardiant; anti-rheumatic; anti-arthritic; antipsoriatic;
KW neuroprotective; inflammation; asthma; allergy; atopic dermatitis;
KW myocardial infarction; migraine; chronic obstructive pulmonary disease;
KW rheumatoid arthritis; multiple sclerosis; inflammatory bowel disease;
KW psoriasis; receptor.
XX
OS Homo sapiens.
XX
PN US6204017-B1.
XX
PD 20-MAR-2001.
XX
PF 07-OCT-1999; 99US-00414010.
XX
PR 07-OCT-1999; 99US-00414010.
XX
PA (SCHE) SCHERING CORP.
XX
PI Behan JX, Hedrick JA, Laz TM, Monsma FJ, Morse KL, Umland SP;
PI Wang S;
XX
DR WPI; 2002-442063/47.
DR N-PSDB; ABZ80663.
XX
PT New nucleic acid encoding antigenic part of human histamine receptor,
PT useful for preparing antibodies, e.g. for treating-histamine related
PT disorders.
XX
PS Example 1; Col 27-30; 19pp; English.
XX
CC This sequence represents the amino acid sequence of a human histamine
CC receptor (HR) designated SP9144. The sequence was isolated by searching
CC databases with the sequence of known G-coupled protein receptor (GCPR).
CC The gene is used for recombinant production of HR and for preparing
CC antibodies (Ab). These Ab are used to purify HR by immunoaffinity
CC chromatography, in immunoassay of histamine receptor, to identify cDNA
CC clones that express the receptor, as antagonist to block binding of
CC histamine (for treating any histamine-associated disorder) and to
CC generate anti-idiotypic antibodies. Agonists and antagonists of the HR
CC protein can be used in the treatment of e.g. inflammation, asthma,
CC allergy, atopic dermatitis, stroke, myocardial infarction, migraine,
CC chronic obstructive pulmonary disease, rheumatoid arthritis, multiple
CC sclerosis, inflammatory bowel disease and psoriasis
XX

SQ Sequence 390 AA;

```
  Query Match             100.0%;  Score 2024;  DB 5;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 8
ABB78276
ID ABB78276 standard; protein; 390 AA.
XX
AC ABB78276;
XX
DT 05-DEC-2002 (first entry)
XX
DE Amino acid sequence of human histamine receptor.
XX
KW Human; histamine receptor; receptor; inflammation; asthma; allergy;
KW atopic dermatitis; stroke; myocardial infection; migraine;
KW chronic obstructive pulmonary disease; COPD); rheumatoid arthritis;
KW multiple sclerosis; inflammatory bowel disease; psoriasis;
KW intracellular second messenger pathway; cellular growth rate;
KW hormone secretion.
XX
OS Homo sapiens.
XX
PN US2002098539-A1.
XX
PD 25-JUL-2002.
XX
PF 19-MAR-2001; 2001US-00812216.
XX
PR 07-OCT-1999; 99US-00414010.
XX
PA (BEHA/) BEHAN J X.
PA (HEDR/) HEDRICK J A.
PA (LAZT/) LAZ T M.
PA (MONS/) MONSMA F J.
PA (MORS/) MORSE K L.
PA (UMLA/) UMLAND S P.
PA (WANG/) WANG S.
XX
PI Behan JX, Hedrick JA, Laz TM, Monsma FJ, Morse KL, Umland SP;
PI Wang S;
XX

DR WPI; 2002-673827/72.
DR N-PSDB; ABW78739.
XX
PT Novel mammalian histamine receptor polypeptide useful for identifying
PT agonist or antagonist for treating diseases such as inflammation, asthma,
PT stroke, migraine, rheumatoid arthritis, multiple sclerosis, psoriasis.
XX
PS Claim 2; Page 16-17; 21pp; English.
XX
CC The present sequence represents a histamine receptor. The polypeptide is
CC useful for identifying an agonist or antagonist of a mammalian histamine
CC receptor. It is useful as an antigen to elicit the production of
CC antibodies. The histamine receptor polypeptide and polynucleotide are
CC useful in the treatment and management of diseases such as inflammation,
CC asthma, allergy, atopic dermatitis, stroke, myocardial infection,
CC migraine, chronic obstructive pulmonary disease (COPD), rheumatoid
CC arthritis, multiple sclerosis, inflammatory bowel disease and psoriasis.
CC They are also useful for modulating intracellular second messenger
CC pathway activated through histamine receptors (cyclic-AMP, calcium,
CC inositol phosphate and mitogen activated protein (MAP) kinase), changes
CC in cellular growth rate, secretion of hormones, receptor-stimulated Ca2+
CC mobilization, mitogenic effects, etc
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 5; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 9
AAM50564
ID AAM50564 standard; protein; 390 AA.
XX
AC AAM50564;
XX
DT 18-MAR-2002 (first entry)
XX
DE Human histamine H4 receptor.
XX
KW Histamine H4 receptor; human; antiasthmatic; antiallergenic;
KW antiinflammatory; cardiant; circulatory; antidiabetic; laxative;
KW diagnosis; gene therapy.
XX
OS Homo sapiens.

XX
PN WO200192485-A1.
XX
PD 06-DEC-2001.
XX
PF 22-FEB-2001; 2001WO-US005914.
XX
PR 31-MAY-2000; 2000US-0208260P.
XX
PA (ORTH) ORTHO-MCNEIL PHARM INC.
XX
PI Lovenberg T, Liu C;
XX
DR WPI; 2002-114339/15.
DR N-PSDB; AAI70980.
XX
PT New mammalian histamine H4 receptor proteins and polynucleotides encoding
PT the proteins, useful in gene therapy for treating diseases where it is
PT beneficial to elevate mammalian histamine H4 receptor activity.
XX
PS Claim 13; Fig 2; 92pp; English.
XX
CC The present sequence is that of a human histamine receptor of the H4
CC subtype, as predicted from a cDNA clone isolated from a bone marrow cDNA
CC library. The invention provides mammalian (human, mouse, rat and guinea
CC pig) histamine H4 receptor nucleic acid molecules (see AAI70980-83) and
CC polypeptides (see AAM50564-67). The nucleic acids have been expressed in
CC recombinant host cells that produce active recombinant protein. The
CC pharmacology of known histamine ligands is demonstrated. Mammalian
CC histamine H4 receptor may be used in gene therapy for the treatment of
CC diseases where it is beneficial to elevate mammalian histamine H4
CC receptor activity. Recombinant protein is useful for identifying
CC modulators of the human histamine H4 receptor. Such modulators may be
CC useful for diagnosing, treating or preventing asthma, allergy,
CC inflammation, cardiovascular and cerebrovascular disorders, non-insulin
CC dependent diabetes mellitus, hyperglycemia, constipation, arrhythmia,
CC disorders of the neuroendocrine system, stress and spasticity
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 5; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

```
RESULT 10
AAG66023
ID   AAG66023 standard; protein; 390 AA.
XX
AC   AAG66023;
XX
DT   27-FEB-2002  (first entry)
XX
DE   Human histamine H4 receptor protein.
XX
KW   Histamine receptor; H4; antirheumatic; antiarthritic; immunosuppressive;
KW   antiasthmatic; antiallergic; neuroprotective; antidiabetic; human;
KW   cerebroprotective; cAMP modulator; gene therapy.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          12. .40
FT                   /note= "transmembrane domain"
FT   Domain          52. .69
FT                   /note= "transmembrane domain"
FT   Domain          88. .110
FT                   /note= "transmembrane domain"
FT   Domain          130. .154
FT                   /note= "transmembrane domain"
FT   Domain          172. .196
FT                   /note= "transmembrane domain"
FT   Domain          304. .325
FT                   /note= "transmembrane domain"
FT   Domain          342. .362
FT                   /note= "transmembrane domain"
XX
PN   WO200185786-A2.
XX
PD   15-NOV-2001.
XX
PF   04-MAY-2001; 2001WO-US014527.
XX
PR   05-MAY-2000; 2000US-0202151P.
PR   23-AUG-2000; 2000US-0227567P.
PR   13-NOV-2000; 2000US-0247855P.
XX
PA   (AMHP ) AMERICAN HOME PROD CORP.
XX
PI   Jones PG,  Blatcher M,  Wu S,  Pausch MH;
XX
DR   WPI; 2002-049442/06.
DR   N-PSDB; AAI67750.
XX
PT   New histamine receptor, termed H4 useful for detecting H4 (ant)agonists
PT   for treating transplanted organ rejection, asthma, allergy, multiple
PT   sclerosis and rheumatoid arthritis.
XX
PS   Claim 5; Fig 1; 66pp; English.
XX
CC   The invention provides an isolated histamine receptor, H4, which binds
CC   ligands comprising imidazole attached to amine by an alkyl chain. The H4
CC   receptor can be expressed by standard recombinant methodology. Cells
CC   expressing H4 receptor protein at a detectable level can suppress cyclic
CC   adenosine monophosphate (cAMP) formation when contacted with the H4
CC   receptor agonist. The H4 receptor and antibodies are used for identifying
CC   H4 receptor modulators. Modulation of histamine H4 receptors is useful
CC   for treating transplanted organ rejection, asthma, allergies and
CC   autoimmnue pathologies such as multiple sclerosis, type I diabetes,
CC   rheumatoid arthritis, cognitive and memory defects. The h4 receptor
CC   protein and nucleic acids are useful targets to identify drugs that are
CC   effective in treating disorders associated with histamine-regulated
CC   processes. Identification and isolation of H4 receptor provides for
CC   development of screening of molecules that interact with H4 receptors.
CC   Genetic variants of H4 can be used to diagnose an H4 associated disease
CC   as described above. The H4 receptor polynucleotide is useful to treat or
CC   prevent a disorder associated with the function of H4 in peripheral blood
CC   leukocytes. The present sequence represents the human histamine H4
CC   receptor protein
XX
SQ   Sequence 390 AA;

  Query Match           100.0%;  Score 2024;  DB 5;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 11
AAU74906
ID   AAU74906 standard; protein; 390 AA.
XX
AC   AAU74906;
XX
DT   09-APR-2002  (first entry)
XX
DE   Amino acid sequence of human G-protein coupled receptor TGR62 protein.
XX
KW   Human; G-protein coupled; receptor; GPCR; TGR62; kidney disease;
KW   signal transduction modulator; cerebral cavernous malformation;
KW   hyperlipidemia; obesity; dyslexia; cardiac myxoma; renal failure;
KW   nephritis; hypertension; liver disease; cirrhosis; blood disorder;
KW   spleen-associated disorder; immune disorder.
XX
OS   Homo sapiens.
XX
PN   WO200200719-A2.
XX
PD   03-JAN-2002.
XX
PF   25-JUN-2001; 2001WO-US020363.
XX
PR   23-JUN-2000; 2000US-0213461P.
XX
PA   (TULA-) TULARIK INC.
XX
PI   Lin DC,  Zhao J,  Chen J,  Cutler G;
XX
DR   WPI; 2002-147880/19.
DR   N-PSDB; ABK12959.
XX
PT   New G-protein coupled receptor polypeptides, useful for identifying
PT   modulators of signal transduction for treating kidney disease,
PT   hyperlipidemia, obesity, dyslexia and cardiac myxoma.
```

XX
PS Claim 26; Page 61; 78pp; English.
XX
CC The present invention relates to a new G-protein coupled receptor (GPCR)
CC polypeptide comprising greater than 70% amino acid sequence identity to
CC the amino acid sequence of human GPCRs TGR62, TGR21, TGR130.1, TGR130.2,
CC human TGR213 or TGR92, 80% amino acid sequence identity to mouse TGR18 or
CC 90% amino acid sequence identity to human novel edg receptor protein, as
CC defined in the specification. The GPCR covalently linked to a solid phase
CC is useful for identifying a compound that modulates signal transduction.
CC The identified compounds are useful for treating kidney disease, cerebral
CC cavernous malformations, hyperlipidemia, obesity, dyslexia and cardiac
CC myxoma. The molecules of the invention are useful for diagnosing
CC disorders or conditions such as kidney-related conditions or diseases
CC such as renal failure, nephritis, nephrotic syndrome, asymptomatic
CC urinary abnormalities, renal tubule defects, hypertension and
CC nephrolithiasis, liver-related disease or condition e.g. cirrhosis,
CC infiltrations, lesions, functional disorders and jaundice and spleen-
CC associated disorders or conditions e.g. splenic enlargement, immune
CC disorders, blood disorders and others. Modulation of the polypeptide of
CC the invention is useful to treat or prevent any of the above conditions
CC or diseases. The present amino acid sequence represents the human GPCR
CC TGR62 protein of the invention. This sequence is one of seven novel G
CC protein coupled receptors of the invention (AAU74904- AAU74911)
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 5; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 12
ABG71960
ID ABG71960 standard; protein; 390 AA.
XX
AC ABG71960;
XX
DT 28-JAN-2003 (first entry)
XX
DE Human G-protein coupled receptor AXOR35.
XX
KW Human; receptor; G-protein coupled receptor; AXOR35; lymphocyte;
KW macrophage; eosinophil; neutrophil; infection; transplant rejection;
KW gastrointestinal disorder; gastric ulcer; inflammatory bowel disease;
KW Crohn's disease; irritable bowel syndrome; vomiting; inflammation;
KW atopic dermatitis; allergy; autoimmune disorder; rheumatoid arthritis;
KW psoriasis; urological disease; urinary retention; cardiovascular disease;
KW myocardial infarction; hypotension; hypertension; pulmonary disorder;
KW chronic obstructive pulmonary disease; cough; renal disease;
KW renal ischaemia; arteriosclerosis; atherosclerosis; psychosis;
KW neurological disorder; migraine; anorexia; anxiety; schizophrenia;
KW dyskinesia; Parkinson's disease; cancer; obesity; stroke; septic shock;
KW graft versus host disease; osteoporosis.
XX
OS Homo sapiens.
XX
PN US2002137054-A1.
XX
PD 26-SEP-2002.
XX
PF 20-JUL-2001; 2001US-00910411.
XX
PR 02-NOV-1999; 99US-00431898.
PR 03-FEB-2000; 2000US-00497790.
PR 20-OCT-2000; 2000US-00693761.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
PI Aubart KM, Bergsma DJ, Fitzgerald L, Graybill TL, Li X;
PI Michalovich D, Morrow DM, Zhu Y;
XX
DR WPI; 2003-074982/07.
DR N-PSDB; ABS57063.
XX
PT Novel isolated G-protein coupled receptor polypeptide, AXOR35, useful for
PT treating infections, gastrointestinal disorders, autoimmune disorders,
PT urological diseases, cardiovascular diseases and cancer.
XX
PS Claim 1; Page 22; 24pp; English.
XX
CC The invention relates to an isolated G-protein coupled receptor
CC polypeptide, AXOR35, (and its homologues and variants) and its encoding
CC polynucleotide (and its homologues, variants, complements and RNA
CC equivalents). Also included are an anti-AXOR35 antibody, an AXOR35
CC expression vector, producing a recombinant host cell by introducing the
CC vector into a cell such that the host cell produces AXOR35, a membrane of
CC the host cell expressing AXOR35, identifying/screening for agonists or
CC antagonists of AXOR35 and inhibiting or promoting the function of
CC lymphocytes, macrophages, eosinophils, or neutrophils in diseased tissue,
CC by administering to the patient AXOR35 agonists or antagonists. The
CC agonist or antagonist identified is useful for treating a disease such as
CC asthma, or for inhibiting or promoting the function of lymphocytes,
CC macrophages, eosinophils, or neutrophils in diseased tissue such as an
CC asthmatic lung. AXOR35 or polynucleotide is useful in diagnostic assays,
CC for identifying compounds that are agonists or antagonists of AXOR35, as
CC vaccines, or for treating infections (bacterial, fungal, protozoan or
CC viral infections), transplant rejection, gastrointestinal disorders (such
CC as gastric ulcer), inflammatory bowel diseases (such as Crohn's disease),
CC irritable bowel syndrome, vomiting, inflammation (such as atopic
CC dermatitis), allergy, autoimmune disorders (such as rheumatoid arthritis,
CC psoriasis), urological diseases (such as urinary retention),
CC cardiovascular diseases (such as myocardial infarction), hypotension,
CC hypertension, pulmonary disorders (such as chronic obstructive pulmonary
CC disease), cough, renal diseases (such as renal ischaemia),
CC arteriosclerosis, atherosclerosis, psychotic and neurological disorders
CC (such as migraine, anorexia, anxiety, schizophrenia), dyskinesias (such
CC as Parkinson's disease), cancer, obesity, stroke, septic shock, graft
CC versus host disease and osteoporosis. The present sequence represents
CC human AXOR35
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 6; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

```
RESULT 13
ABU92265
ID   ABU92265 standard; protein; 390 AA.
XX
AC   ABU92265;
XX
DT   16-JUL-2003  (first entry)
XX
DE   Human G protein-coupled receptor hRUP7.
XX
KW   Human; receptor; orphan G protein-coupled receptor; GPCR; hARE-3; hARE-4;
KW   hARE-5; hRUP3; hRUP5; hRUP6; hRUP7; hGPCRZ7; hARE-1; hARE-2; hPPR1; hG2A;
KW   hCHN3; hCHN4; hCHN6; hCHN8; hCHN9; hCHN10; hRUF4; signalling cascade.
XX
OS   Homo sapiens.
XX
PN   US2003017528-A1.
XX
PD   23-JAN-2003.
XX
PF   06-JUN-2001; 2001US-00875076.
XX
PR   20-NOV-1998;   98US-0109213P.
PR   16-FEB-1999;   99US-0120416P.
PR   26-FEB-1999;   99US-0121852P.
PR   12-MAR-1999;   99US-0123946P.
PR   12-MAR-1999;   99US-0123949P.
PR   28-MAY-1999;   99US-0136436P.
PR   28-MAY-1999;   99US-0136437P.
PR   28-MAY-1999;   99US-0136439P.
PR   28-MAY-1999;   99US-0136567P.
PR   28-MAY-1999;   99US-0137127P.
PR   28-MAY-1999;   99US-0137131P.
PR   29-JUN-1999;   99US-0141448P.
PR   28-SEP-1999;   99US-0156333P.
PR   29-SEP-1999;   99US-0156555P.
PR   29-SEP-1999;   99US-0156634P.
PR   12-OCT-1999;   99US-00417044.
XX
PA   (CHEN/) CHEN R.
PA   (DANG/) DANG H T.
PA   (LIAW/) LIAW C W.
PA   (LINI/) LIN I.
XX
PI   Chen R, Dang HT, Liaw CW, Lin I;
XX
DR   WPI; 2003-428952/40.
DR   N-PSDB; ACA93262.
XX
PT   Novel endogenous, orphan, human G protein-coupled receptors useful for
PT   identification of modulators of the receptor and as research tools for
PT   understanding the role of the receptor in human body.
XX
PS   Claim 26; Page 23; 54pp; English.
XX
CC   The invention relates to a human G protein-coupled receptor (GPCR)
CC   appearing as ABU92259-ABU92277 (encoded by cDNAs ACA93256-ACA93274) named
CC   hARE-3, hARE-4, hARE-5, hRUP3, hRUP5, hRUP6, hRUP7, hGPCRZ7, hARE-1, hARE
CC   -2, hPPR1, hG2A, hCHN3, hCHN4, hCHN6, hCHN8, hCHN9, hCHN10 and hRUP4.
CC   Also included are a plasmid comprising a vector and one of the cDNAs
CC   above and a host cell comprising the plasmid. The GPCRs are useful for
CC   the direct identification of candidate compounds as inverse agonists,
CC   agonists or partial agonists. In vitro and in vivo systems incorporating
CC   GPCRs is useful for elucidating and understanding the roles these
CC   receptors play in the human condition, both normal and diseased, as well
CC   as understanding the role of constitutive activation as it applies to
CC   understanding the signalling cascade. The cDNAs are useful for making a
CC   probe for dot-blot analysis against tissue mRNA and/or RT-PCR
CC   identification of the expression of the receptor in tissue samples. The
CC   present sequence represents a GPCR of the invention
XX
SQ   Sequence 390 AA;
```

```
  Query Match             100.0%;  Score 2024;  DB 6;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-211;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

```
RESULT 14
ABP81727
ID   ABP81727 standard; protein; 390 AA.
XX
AC   ABP81727;
XX
DT   04-MAR-2003  (first entry)
XX
DE   Human histamine H4 receptor protein SEQ ID NO:629.
XX
KW   G protein-coupled receptor; GPCR; antigenic peptide; gene therapy;
```

KW G protein-coupled receptor modulator; antibody; immune-related disease;
KW growth-related disease; cell regeneration-related disease; AIDS; cancer;
KW immunological-related cell proliferative disease; autoimmune disease;
KW Alzheimer's disease; atherosclerosis; infection; osteoarthritis; allergy;
KW osteoporosis; cardiomyopathy; inflammation; Crohn's disease; diabetes;
KW graft versus host disease; Parkinson's disease; multiple sclerosis; pain;
KW psoriasis; anxiety; depression; schizophrenia; dementia; memory loss;
KW mental retardation; epilepsy; asthma; tuberculosis; obesity; nausea;
KW hypertension; hypotension; renal disorder; rheumatoid arthritis; trauma;
KW ulcer.
XX
OS Homo sapiens.
XX
PN WO200261087-A2.
XX
PD 08-AUG-2002.
XX
PF 19-DEC-2001; 2001WO-US050107.
XX
PR 19-DEC-2000; 2000US-0257144P.
XX
PA (LIFE-) LIFESPAN BIOSCIENCES INC.
XX
PI Burmer GC, Roush CL, Brown JP;
XX
DR WPI; 2003-046718/04.
DR N-PSDB; ABZ42573.
XX
PT New isolated antigenic peptides e.g., for G protein-coupled receptors
PT (GPCR), useful for diagnosing and designing drugs for treating conditions
PT in which GPCRs are involved, e.g. AIDS, Alzheimer's disease, cancer or
PT autoimmune diseases.
XX
PS Disclosure; Fig 1; 523pp; English.
XX
CC The present invention describes antigenic peptides (I) comprising: (a)
CC any one of 1601 sequences (see ABP82019 to ABP83619) of 12-24 amino
CC acids. Also described: (1) an assay for the detection of a particular G
CC protein-coupled receptor (GPCR) or a candidate polypeptide in a sample;
CC and (2) an isolated antibody having high specificity and high affinity or
CC avidity for a particular GPCR. (I) can be used as GPCR modulators and in
CC gene therapy. The antigenic peptides for GPCRs are useful in detecting an
CC antibody against a particular GPCR, and in the production of specific
CC antibodies. The peptides and antibodies are also useful for detecting the
CC presence or absence of corresponding GPCRs. The antigenic peptides for
CC GPCRs and antibodies are useful for diagnosing and designing drugs for
CC treating immune-related diseases, growth-related diseases, cell
CC regeneration-related disease, immunological-related cell proliferative
CC diseases, or autoimmune diseases, e.g. AIDS, Alzheimer's disease,
CC atherosclerosis, bacterial, fungal, protozoan or viral infections,
CC osteoarthritis, osteoporosis, cancer, cardiomyopathy, chronic and acute
CC inflammation, allergies, Crohn's disease, diabetes, graft versus host
CC disease, Parkinson's disease, multiple sclerosis, pain, psoriasis,
CC anxiety, depression, schizophrenia, dementia, mental retardation, memory
CC loss, epilepsy, asthma, tuberculosis, obesity, nausea, hypertension,
CC hypotension, renal disorders, rheumatoid arthritis, trauma, ulcers, or
CC any other disorder in which GPCRs are involved. The antibodies may be
CC used in immunoassays and immunodiagnosis. ABZ42523 to ABZ42869 encode
CC GPCR proteins given in ABP81675 to ABP82018, which are used in the
CC exemplification of the present invention
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 6; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 15
AAE36417
ID AAE36417 standard; protein; 390 AA.
XX
AC AAE36417;
XX
DT 07-AUG-2003 (first entry)
XX
DE Human H4 receptor wild-type protein #2.
XX
KW Human; H4; histamine receptor; inflammatory bowel disease; psoriasis;
KW atopic dermatitis; stroke; myocardial infarction; migraine; allergy;
KW chronic obstructive pulmonary disease; COPD; cerebroprotective; therapy;
KW rheumatoid arthritis; multiple sclerosis; inflammation; neuroprotective;
KW asthma; receptor.
XX
OS Homo sapiens.
XX
PN WO2003020907-A2.
XX
PD 13-MAR-2003.
XX
PF 30-AUG-2002; 2002WO-US027891.
XX
PR 31-AUG-2001; 2001US-0316762P.
PR 13-NOV-2001; 2001US-0332697P.
XX
PA (MERI) MERCK & CO INC.
XX
PI Gallagher MJ, Yates SL;
XX
DR WPI; 2003-290186/28.
DR N-PSDB; AAD55126.
XX
PT Novel splice variants of human H4 histamine receptor, H4b and H4c, useful
PT for identifying agonists or antagonists of the receptor which are useful
PT for treating multiple sclerosis, asthma, allergy, psoriasis and stroke.
XX
PS Example; Page 58-60; 31pp; English.
XX
CC The invention relates to splice variants of human H4 histamine receptor,
CC H4b and H4c. The invention is useful for identifying an agonist,
CC antagonist or inverse agonist of a mammalian histamine receptor. The
CC agonist, antagonist or inverse agonist of H4b and H4c is useful for
CC treating inflammation, asthma, allergy, atopic dermatitis, stroke,
CC myocardial infarction, migraine, chronic obstructive pulmonary disease
CC (COPD), rheumatoid arthritis, multiple sclerosis, inflammatory bowel
CC disease, or psoriasis. The present sequence is human H4 receptor protein
XX
SQ Sequence 390 AA;

Query Match 100.0%; Score 2024; DB 6; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.5e-211;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Search completed: March 28, 2006, 13:54:32
Job time : 190 secs

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: March 28, 2006, 13:54:50 ; Search time 40 Seconds
(without alignments)
938.113 Million cell updates/sec

Title: US-10-616-088-2
Perfect score: 2024
Sequence: 1 MPDTNSTINLSLSTRVTLAF.....KIFCIKKQPLPSQHSRSVSS 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2024	100.0	390	2	JC7566	histamine H4 recep
2	432	21.3	639	2	A55019	muscarinic acetylc
3	415	20.5	590	2	S01114	muscarinic acetylc
4	413	20.4	590	2	S47572	muscarinic acetylc
5	411	20.3	590	2	S10128	muscarinic acetylc
6	409	20.2	589	2	B29514	muscarinic acetylc
7	408	20.2	589	2	A29476	muscarinic acetylc
8	406.5	20.1	484	2	S58868	G protein-coupled
9	402.5	19.9	515	2	A40491	alpha-1-adrenergic
10	399.5	19.7	517	2	A45121	alpha-1B adrenergi
11	393.5	19.4	379	2	JC6178	serotonin receptor
12	392.5	19.4	515	2	JC1525	alpha-1B-adrenergi
13	392.5	19.4	532	2	JT0530	muscarinic acetylc
14	391.5	19.3	460	2	I51837	muscarinic recepto
15	391.5	19.3	460	2	A29514	muscarinic acetylc
16	391	19.3	460	2	A24325	muscarinic acetylc
17	390	19.3	491	2	A41632	histamine H1 recep
18	388	19.2	460	2	S09508	muscarinic acetylc
19	387	19.1	466	2	A27386	muscarinic acetylc
20	386	19.1	466	2	S10126	muscarinic acetylc
21	386	19.1	486	2	JC1415	histamine H1 recep
22	385.5	19.0	531	2	JT0531	muscarinic acetylc
23	384.5	19.0	501	2	T18863	hypothetical prote
24	381	18.8	466	2	A40972	muscarinic acetylc
25	380.5	18.8	477	2	S71323	alpha-1A adrenergi
26	380.5	18.8	488	2	I56507	histamine H1 recep
27	379.5	18.8	466	2	JH0197	muscarinic acetylc
28	377.5	18.7	429	2	S65656	alpha-1C-adrenergi
29	377.5	18.7	466	2	JN0765	alpha-1C-adrenergi
30	377.5	18.7	499	2	S65657	alpha-1C-adrenergi
31	376.5	18.6	466	2	S10856	muscarinic acetylc
32	375.5	18.6	460	2	A31897	muscarinic acetylc
33	373.5	18.5	476	2	JC5042	G protein-coupled
34	372.5	18.4	390	2	JN0268	serotonin receptor
35	372.5	18.4	466	2	A35375	alpha-1-adrenergic
36	372.5	18.4	466	2	I57959	alpha-1C adrenergi
37	372	18.4	487	2	JC2495	histamine H1 recep
38	370	18.3	444	1	DYBOD2	dopamine receptor
39	369.5	18.3	501	2	JH0447	alpha-1A-adrenergi
40	369.5	18.3	572	2	I39369	alpha-1A-adrenergi
41	367.5	18.2	377	2	A53279	serotonin receptor
42	366.5	18.1	366	2	A47321	serotonin receptor
43	366.5	18.1	601	2	JH0170	octopamine recepto
44	366	18.1	444	1	DYMSD2	dopamine receptor
45	366	18.1	444	1	S08146	dopamine receptor

ALIGNMENTS

RESULT 1
JC7566
histamine H4 receptor, HH4R - human
C;Species: Homo sapiens (man)
C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004
C;Accession: JC7566
R;Nakamura, T.; Itadani, H.; Hidaka, Y.; Ohta, M.; Tanaka, K.
Biochem. Biophys. Res. Commun. 279, 615-620, 2000
A;Title: Molecular cloning and characterization of a new human histamine receptor, HH4R
A;Reference number: JC7566; MUID: 20568725; PMID:11118334
A;Contents: Leukocyte
A;Accession: JC7566
A;Molecule type: mRNA
A;Residues: 1-390 <NAK>
A;Cross-references: UNIPROT:Q9H3N8; UNIPARC:UPI0000039A92; DDBJ:AB045370
C;Comment: This receptor, belonging to the biogenic amine receptors of G protein-couple
C;Genetics:
A;Gene: hh4r
C;Keywords: G protein-coupled receptor; transmembrane protein

Query Match 100.0%; Score 2024; DB 2; Length 390;
Best Local Similarity 100.0%; Pred. No. 3.1e-162;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
```

RESULT 2
A55019
muscarinic acetylcholine receptor, M3 isoform - chicken
C;Species: Gallus gallus (chicken)
C;Date: 11-Nov-1994 #sequence_revision 11-Nov-1994 #text_change 09-Jul-2004
C;Accession: A55019
R;Gadbut, A.P.; Galper, J.B.
J. Biol. Chem. 269, 25823-25829, 1994
A;Title: A novel M-3 muscarinic acetylcholine receptor is expressed in chick atrium and
A;Reference number: A55019; MUID:95014393; PMID:7929287
A;Accession: A55019
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-639 <GAD>
A;Cross-references: UNIPROT:P49578; UNIPARC:UPI00001252B4; GB:L10617; NID:g530097; PIDN:
C;Superfamily: vertebrate rhodopsin
C;Keywords: neurotransmitter receptor

Query Match 21.3%; Score 432; DB 2; Length 639;
Best Local Similarity 23.0%; Pred. No. 2.2e-28;
Matches 126; Conservative 92; Mismatches 151; Indels 180; Gaps 15;

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Qy          4 TNSTINLSLSTR---------VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFF 54
              |||::| ::             .| :||   ::|   ::|| |||::| |:| |:  ::||
Db         96 TNSSLNATIKDPLGGHAVWQVVLIAFLTGIIALVTIIGNILVIVSFKVNKQLKTVNNYFL 155

Qy         55 LNLAISDFFVGVISIPLYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRY 113
              |:|| :|  :||||: |:  : :   |  |   |  ||: ||:   ||| |:::||:|||
Db        156 LSLACADLIIGVISMNLFTTYIIMGHWALGNLACDLWLSIDYVASNASVMNLLVISFDRY 215

Qy        114 LSVSNAVSYRTQHTGVLKIVTLMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGF 168
               |::  ::|| : |   |   :|: : |:::|::  | ||  :  :  :    ||   |
Db        216 FSITRPLTYRAKRT--TKRAGVMIGLAWIISFVLWAPAILFWQYFVGKRTVPLDECFIQF 273

Qy        169 FSEWYILAITSFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSF 228
              ||  |   |:   | :|| :::     :|| ::|   ' | :  || |  |      |
Db        274 LSEPIITFGTAIAAFYLPVTIMSI----LYWRIYKETE-KRTKELAGLQASGSEAETARF 328

Qy        229 RGRLSSRRSLSASTEVPASFHSERQRRKSSLM-------------------------FSS 263
              :  | ||||       |:  :||  | |                           ||
Db        329 VHQTGSSRSLS-------SYELQRQSTKRSSRRKYRRCHFWLTMKSWEPNTDQGDQEHSS 381

Qy        264 RTKMNSNTIASKM---------------------------------------------- 276
                |:|  |: :
Db        382 SDSWNNNDAAASLENSASSDEEDITAETRAIYSIVLKLPGHSAILNSTKLPSSEDLNESA 441

Qy        277 --------------------------GSFSQ----------------SDSVA------ 286
                                       ||| :                || ::
Db        442 DELQKSDTDSQEKKPKKLQPPKSIQDGGSFQKSFSKLPIQPGSAETATASDGISSVTKTS 501

Qy        287 ----------------------LHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFT 323
                                   : :|: : |:: :: |::|: :|  | : | ||::
Db        502 AALPLSFKEATLAKKFALKTRSQITKRKRMSLIKEKKAAQTLSAILFAFIITWTPYNIMV 561

Qy        324 IVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIF---CIKKQPL 380
              :| :|      ||:||  : :|| : || |||: | ||:| |:  |   :    | |::
Db        562 LVNTFCDCV--PKTVW-NLGYWLCYINSTVNPVCYALCNKMFRNTFKMLLLCQCDKRKRR 618

Qy        381 PSQHSRSVS 389
                |: :  |
Db        619 KQQYQQRQS 627
```

RESULT 3
S01114
muscarinic acetylcholine receptor M2, glandular - pig
N;Alternate names: muscarinic acetylcholine receptor III
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 09-Jul-2004
C;Accession: S01114
R;Akiba, I.; Kubo, T.; Maeda, A.; Bujo, H.; Nakai, J.; Mishina, M.; Numa, S.
FEBS Lett. 235, 257-261, 1988
A;Title: Primary structure of porcine muscarinic acetylcholine receptor III and antagon
A;Reference number: S01114; MUID:88296835; PMID:3402600
A;Accession: S01114
A;Molecule type: DNA
A;Residues: 1-590 <AKI>
A;Cross-references: UNIPROT:P11483; UNIPARC:UPI00001252B7; EMBL:X12712; NID:g1861; PIDN
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; transm
F;68-91/Domain: transmembrane #status predicted <TM1>
F;105-125/Domain: transmembrane #status predicted <TM2>
F;143-164/Domain: transmembrane #status predicted <TM3>
F;185-207/Domain: transmembrane #status predicted <TM4>
F;231-252/Domain: transmembrane #status predicted <TM5>
F;493-513/Domain: transmembrane #status predicted <TM6>
F;528-546/Domain: transmembrane #status predicted <TM7>

Query Match 20.5%; Score 415; DB 2; Length 590;
Best Local Similarity 24.3%; Pred. No. 5.4e-27;
Matches 126; Conservative 88; Mismatches 151; Indels 154; Gaps 15;

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Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
              | :||   ::|   ::|| |||:|| |:| |:  ::|| |:|| :|  :||||: |:  :
Db         69 VFIAFLTGILALVTIIGNILVIVAFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 128

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
               :   |  |  |  ||: ||:   ||| |:::||:||| |::  ::|| : |   |
Db        129 IIMNRWALGNLACDLWLSIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRT--TKRAG 186

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
              :|: : ||:|::  | ||  :  :  :    ||   | ||  |   |:  | :|| :
Db        187 VMIGLAWVISFILWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTI 246

Qy        190 VAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLS---------- 239
              :      :|| ::|      | :   || |  :     :|      | || |
Db        247 MTI----LYWRIYKETE-KRTKELAGLQASGTEAEAENFVHPTGSSRSCSSYELQQQSLK 301

Qy        240 ----------------------------------------ASTEVPASFHSERQRRKS 257
                                                     || |  ||   |    ::
Db        302 RSARRKYGRCHFWFTTKSWKPSAEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSET 361

Qy        258 SLMFS----------SRTKMNSN----------TI-----ASKM---------GSFS 280
                ::|           : ||:.|:          |:     |||:         |||
Db        362 RAIYSIVLKLPGHSTILNSTKLPSSDNLQVPEEELGTVDLERKASKLQAQKSMDDGGSFQ 421

Qy        281 QSDS-------------------------------------------VALHQREHV 293
              :| |                                          : :|: :
Db        422 KSFSKLPIQLESAVDTAKASDVNSSVGKTTATLPLSFKEATLAKRFALKTRSQITKRKRM 481

Qy        294 ELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFV 353
              |:: :: |::|: :|  | : | ||::  :| :|   |   ||: |  : :|| : || |
Db        482 SLIKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFCDSCI-PKTYW-NLGYWLCYINSTV 539

Qy        354 NPLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
              ||: | ||:| |:  |  :    | |::    |: :  |
Db        540 NPVCYALCNKTFRTTFKMLLLCQCDKRKRRKQQYQQRQS 578
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RESULT 4
S47572
muscarinic acetylcholine receptor m3 - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 27-Jan-1995 #sequence_revision 27-Jan-1995 #text_change 09-Jul-2004
C;Accession: S47572
R;Lee, P.H.K.; Hodges, P.K.; Glickman, F.; Chang, K.J.
Biochim. Biophys. Acta 1223, 151-154, 1994
A;Title: Cloning and expression of a cDNA encoding bovine muscarinic acetylcholine m3 r
A;Reference number: S47572; MUID:94339178; PMID:8061048
A;Accession: S47572
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-590 <LEE>
A;Cross-references: UNIPROT:P41984; UNIPARC:UPI00001252B3; EMBL:U08286; NID:g520465; PI
C;Superfamily: vertebrate rhodopsin

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C;Keywords: neurotransmitter receptor

  Query Match             20.4%;  Score 413;  DB 2;  Length 590;
  Best Local Similarity   23.1%;  Pred. No. 7.9e-27;
  Matches  120;  Conservative   85;  Mismatches  160;  Indels  154;  Gaps   12;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
Db         69 VFIAFLTGVLALVTIIGNILVIVAFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 128

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
Db        129 IIMNRWALGNLACDLWLSIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRT--TKRAG 186

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
Db        187 VMIGLAWVISFILWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTI 246

Qy        190 VAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFH 249
Db        247 MTI----LYWRIYKETE-KRTKELAGLQASGTEAEAENFVHPTGSSRSCSSYELQQQSMK 301

Qy        250 SERQRRKSSLMF------------------SSRTKMNSNTIASKMGSFSQSD-------- 283
Db        302 RSARRKYGRCHFWFTTKSWKPSAEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSET 361

Qy        284 -----------------------------------SVALH------------------- 288
Db        362 RAIYSIVLKLPGHSTILNSTKLPSSDNLQVPEEELGSVGLERKPSKLQTQQSMDDGGSFQ 421

Qy        289 ---------------------------------------------------QREHV 293
Db        422 KSFSKLPIQLESAVDTAKASDVNSSVGKTTATLPLSFKEATLAKRFALKTRSQITKRKRM 481

Qy        294 ELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFV 353
Db        482 SLIKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFCDSCI-PKTYW-NLGYWLCYINSTV 539

Qy        354 NPLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
Db        540 NPVCYALCNKTFRNTFKMLLLCQCDKRKRRKQQYQQRQS 578


RESULT 5
S10128
muscarinic acetylcholine receptor M4 - human
C;Species: Homo sapiens (man)
C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change 09-Jul-2004
C;Accession: S10128
R;Peralta, E.G.; Ashkenazi, A.; Winslow, J.W.; Smith, D.H.; Ramachandran, J.; Capon, D.J
EMBO J. 6, 3923-3929, 1987
A;Title: Distinct primary structures, ligand-binding properties and tissue-specific expr
A;Reference number: S04326; MUID:88166632; PMID:3443095
A;Accession: S10128
A;Molecule type: DNA
A;Residues: 1-590 <PER>
A;Cross-references: UNIPROT:P20309; UNIPARC:UPI0000050453; EMBL:X15266; NID:g32323; PIDN
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; transme
F;68-95/Domain: transmembrane #status predicted <TM1>
F;105-131/Domain: transmembrane #status predicted <TM2>
F;143-164/Domain: transmembrane #status predicted <TM3>
F;185-207/Domain: transmembrane #status predicted <TM4>
F;231-252/Domain: transmembrane #status predicted <TM5>
F;493-513/Domain: transmembrane #status predicted <TM6>
F;525-546/Domain: transmembrane #status predicted <TM7>
F;5,6,15,41/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             20.3%;  Score 411;  DB 2;  Length 590;
  Best Local Similarity   22.6%;  Pred. No. 1.2e-26;
  Matches  118;  Conservative   95;  Mismatches  150;  Indels  158;  Gaps   14;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
Db         69 VFIAFLTGILALVTIIGNILVIVSFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 128

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
Db        129 IIMNRWALGNLACDLWLAIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRT--TKRAG 186

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
Db        187 VMIGLAWVISFVLWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTI 246

Qy        190 VAYFNMNIYWSLWK---------------------------------------------- 203
Db        247 MTI----LYWRIYKETEKRTKELAGLQASGTEAETENFVHPTGSSRSCSSYELQQQSMKR 302

Qy        204 --RDHLSRC----------------QSHPGLTAVSSN---------------------- 222
Db        303 SNRRKYGRCHFWFTTKSWKPSSEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSETR 362

Qy        223 --------ICGHSF--------------------------RGRLSSRRSLSASTEVPA 246
Db        363 AIYSIVLKLPGHSTILNSTKLPSSDNLQVPEEELGMVDLERKADKLQAQKSVDDGGSFPK 422

Qy        247 SFHSERQRRKSSLMFSSRTKMNSN--------------TIASKMGSFSQSDSVALHQRE 291
Db        423 SFSKLPIQLESAVDTAKTSDVNSSVGKSTATLPLSFKEATLAKRFALKTRSQ---ITKRK 479

Qy        292 HVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNS 351
Db        480 RMSLVKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFCDSCI-PKTFW-NLGYWLCYINS 537

Qy        352 FVNPLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
Db        538 TVNPVCYALCNKTFRTTFKMLLLCQCDKKKRRKQQYQQRQS 578


RESULT 6
B29514
muscarinic acetylcholine receptor M3 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 09-Jul-2004
C;Accession: B94518; B94293; B37121; B29514
R;Bonner, T.I.
submitted to GenBank, July 1987
A;Reference number: A94518
A;Accession: B94518
A;Molecule type: mRNA
A;Residues: 1-589 <BO1>
A;Cross-references: UNIPROT:P08483; UNIPARC:UPI0000163B75
R;Bonner, T.I.; Buckley, N.J.; Young, A.C.; Brann, M.R.
Science 237, 527-532, 1987
A;Title: Identification of a family of muscarinic acetylcholine receptor genes.
A;Reference number: A94293; MUID:87263421; PMID:3037705
A;Accession: B94293
A;Molecule type: mRNA
A;Residues: 1-269;463-589 <BO2>
A;Cross-references: UNIPARC:UPI00001778C1; UNIPARC:UPI00001778C2
A;Experimental source: cerebral cortex
A;Note: only a part of the protein translation is given; none of the nucleotide sequenc
R;Kurtenbach, E.; Curtis, C.A.M.; Pedder, E.K.; Aitken, A.; Harris, A.C.M.; Hulme, E.C.
J. Biol. Chem. 265, 13702-13708, 1990
A;Title: Muscarinic acetylcholine receptors. Peptide sequencing identifies residues inv
A;Reference number: A37121; MUID:90337982; PMID:2380182
A;Accession: B37121
A;Status: preliminary
A;Molecule type: protein
A;Residues: 104-166 <KUR>
A;Cross-references: UNIPARC:UPI00001778C3
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; transm
F;67-90/Domain: transmembrane #status predicted <TM1>
F;104-124/Domain: transmembrane #status predicted <TM2>
F;142-163/Domain: transmembrane #status predicted <TM3>
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F;184-206/Domain: transmembrane #status predicted <TM4>
F;230-251/Domain: transmembrane #status predicted <TM5>
F;492-512/Domain: transmembrane #status predicted <TM6>
F;527-545/Domain: transmembrane #status predicted <TM7>
F;6,15,41,48,52/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             20.2%;  Score 409;  DB 2;  Length 589;
  Best Local Similarity   23.4%;  Pred. No. 1.7e-26;
  Matches  121;  Conservative   89;  Mismatches  156;  Indels  152;  Gaps   14;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
              | :||     :|   ::|| |||:|| |:| |:  ::|| |:|| :|  :|||| |:  :
Db         68 VFIAFLTGFLALVTIIGNILVIVAFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 127

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
                :   |  |   |  ||: ||:   ||| |:::||:||| |::  ::|| : |   : |
Db        128 IIMNRWALGNLACDLWLSIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRTTKRRGVM 187

Qy        135 LMVAVWVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVILV 190
              : :| ||::|::  | ||  : :  : :    ||  | ||  |  |:  | :|| ::
Db        188 IGLA-WVISFVLWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTIM 246

Qy        191 AYFNMNIYWSLWK------------------------------------------------ 203
                    :|| ::|
Db        247 TI----LYWRIYKETEKRTKELAGLQASGTEAEAENFVHPTGSSRSCSSYELQQQGVKRS 302

Qy        204 -RDHLSRC-----------------QSHPGLTAVSSNICGHSFRGRLSS------------ 234
               |    ||                 | |    : ::|    |     ||
Db        303 SRRKYGRCHFWFTTKSWKPSAEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSETRA 362

Qy        235 ----------RRSLSASTEVPAS------------FHSERQRRK---------------- 256
                       |:  ||::|:|                ||   |
Db        363 IYSIVLKLPGHSSILNSTKLPSSDNLQVSNEDLGTVDVERNAHKLQAQKSMGDGDNCQKD 422

Qy        257 --------SSLMFSSRTKMNSNTIASKMGS--------------FSQSDSVALHQREHVE 294
                     | : : :|  ::|: | |  :                |:      : :|: :
Db        423 FTKLPIQLESAVDTGKTS-DTNSSADKTTATLPLSFKEATLAKRFALKTRSQITKRKRMS 481

Qy        295 LLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVN 354
              |:: :: |::|: :|  | : | ||::  :| :|  |   ||: |  : :|| : || ||
Db        482 LIKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFCDSCI-PKTYW-NLGYWLCYINSTVN 539

Qy        355 PLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
              |: | ||:| |:  |  :    | |::    |: :  |
Db        540 PVCYALCNKTFRTTFKTLLLCQCDKRKRRKQQYQQRQS 577


RESULT 7
A29476
muscarinic acetylcholine receptor M4 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 09-Jul-2004
C;Accession: A29476
R;Braun, T.; Schofield, P.R.; Shivers, B.D.; Pritchett, D.B.; Seeburg, P.H.
Biochem. Biophys. Res. Commun. 149, 125-132, 1987
A;Title: A novel subtype of muscarinic receptor identified by homology screening.
A;Reference number: A29476; MUID:88077068; PMID:3120722
A;Accession: A29476
A;Molecule type: mRNA
A;Residues: 1-589 <BRA>
A;Cross-references: UNIPROT:P08483; UNIPARC:UPI0000170853; GB:M18088; NID:g202657; PIDN:
A;Experimental source: brain
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; transme
F;67-90/Domain: transmembrane #status predicted <TM1>
F;104-124/Domain: transmembrane #status predicted <TM2>
F;142-163/Domain: transmembrane #status predicted <TM3>
F;184-206/Domain: transmembrane #status predicted <TM4>
F;230-251/Domain: transmembrane #status predicted <TM5>
F;492-512/Domain: transmembrane #status predicted <TM6>
F;527-545/Domain: transmembrane #status predicted <TM7>

  Query Match             20.2%;  Score 408;  DB 2;  Length 589;
  Best Local Similarity   23.3%;  Pred. No. 2.1e-26;
  Matches  121;  Conservative   89;  Mismatches  155;  Indels  154;  Gaps   15;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
              | :||     :|   ::|| |||:|| |:| |:  ::|| |:|| :|  :|||| |:  :
Db         68 VFIAFLTGFLALVTIIGNILVIVAFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 127

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
                :   |  |   |  ||: ||:   ||| |:::||:||| |::  ::|| : |   : |
Db        128 IIMNRWALGNLACDLWLSIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRT--TKRAG 185

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
              :|: : ||::|::  | ||  : :  : :    ||  | ||  |  |:  | :|| :
Db        186 VMIGLAWVISFVLWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTI 245

Qy        190 VAYFNMNIYWSLWK------------------------------------------------ 203
              :      :|| ::|
Db        246 MTI----LYWRIYKETEKRTKELAGLQASGTEAEAENFVHPTGSSRSCSSYELQQQGVKR 301

Qy        204 --RDHLSRC-----------------QSHPGLTAVSSNICGHSFRGRLSS------------ 234
                 |    ||                 | |    : ::|    |     ||
Db        302 SSRRKYGRCHFWFTTKSWKPSAEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSETR 361

Qy        235 ----------RRSLSASTEVPAS------------FHSERQRRK---------------- 256
                       |:  ||::|:|                ||   |
Db        362 AIYSIVLKLPGHSSILNSTKLPSSDNLQVSNEDLGTVDVERNAHKLQAQKSMGDGDNCQK 421

Qy        257 ---------SSLMFSSRTKMNSNTIASKMGS--------------FSQSDSVALHQREHV 293
                      | : : :|  ::|: | |  :                |:      : :|: :
Db        422 DFTKLPIQLESAVDTGKTS-DTNSSADKTTATLPLSFKEATLAKRFALKTRSQITKRKRM 480

Qy        294 ELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFV 353
              |:: :: |::|: :|  | : | ||::  :| :|  |   ||: |  : :|| : || |
Db        481 SLIKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFRDSCI-PKTYW-NLGYWLCYINSTV 538

Qy        354 NPLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
              ||: | ||:| |:  |  :    | |::    |: :  |
Db        539 NPVCYALCNKTFRTTFKMLLLCQCDKRKRRKQQYQQRQS 577


RESULT 8
S58868
G protein-coupled receptor GCR1 - migratory locust
C;Species: Locusta migratoria (migratory locust)
C;Date: 15-Feb-1996 #sequence_revision 01-Mar-1996 #text_change 09-Jul-2004
C;Accession: S58868; S58869
R;Vanden Broeck, J.; Vulsteke, V.; Huybrechts, R.; De Loof, A.
J. Neurochem. 64, 2387-2395, 1995
A;Title: Characterization of a cloned locust tyramine receptor cDNA by functional expre
A;Reference number: S58868; MUID:95279966; PMID:7760020
A;Accession: S58868
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-484 <VAN>
A;Cross-references: UNIPROT:Q25321; UNIPARC:UPI0000130B64; EMBL:X69520; NID:g871404; PI
A;Accession: S58869
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: mRNA
A;Residues: 1-307,'D',309-338,'K',340-484 <VA2>
A;Cross-references: UNIPARC:UPI0000130B66; EMBL:X69521; NID:g871406; PIDN:CAA49269.1; P
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, November 1992
C;Superfamily: octopamine receptor type I
C;Keywords: G protein-coupled receptor

  Query Match             20.1%;  Score 406.5;  DB 2;  Length 484;
  Best Local Similarity   24.2%;  Pred. No. 2.2e-26;
  Matches  106;  Conservative   94;  Mismatches  149;  Indels   89;  Gaps   12;

Qy         19 AFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPHTLF 78
              |  :||:    ::|| ||:|:    | ||   ::| ::||::|  | |: :|  : ::|
Db         55 AVSLSLIILITIVGNVLVVLSVFTYKPLRIVQNFFIVSLAVADLTVAVLVMPFNVAYSLI 114

Qy         79 E-WDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVTLMV 137
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Db        115 QRWVFGIVVCKMWLTCDVLCCTASILNLCAIALDRYWAITDPINYAQKRT-LRRVLAMIA 173

Qy        138 AVWVLAFLVNGPMILVSESWKDEGSECEPGFFSE--WYILAITSFLEFVIPVILVAYFNM 195

Db        174 GVWLLSGVISSPPLIGWNDWPMEFNDTTPCQLTEEQGYVI-YSSLGSFFIPLFIMTIVYV 232

Qy        196 NIYWS----LWKRDHLSRCQS----HPGLTAVSSNICGHSFRGRLSSRRSLSASTE---- 243

Db        233 EIFIATKRRLRERAKASKLNSAMKQQMAAQAVPSSVPSH-------DQESVSSETNHNEL 285

Qy        244 ----VPASFHSERQRRKSSLM---------------------------------------- 260

Db        286 PPPPAPPSKEKRRKTKKKSKKKEQAAEEGRFLAPAMVAEDSVTDNSVSVGPVARNHLAED 345

Qy        261 -FSSRTKMNSNT------------IASKMGSFS-----QSDSVALHQ----REHVELLRA 298

Db        346 GYTCTTTTTTTTTTTTAVTDSPRSRTASQKGSTAPPTPVQPKSIPVYQFIEEKQRISLSKE 405

Qy        299 RRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLY 358

Db        406 RRAARTLGIIMGVFVVCWLPFFLMYVIVPFCNPSCKPSPKLVNFITWLGYINSALNPIIY 465

Qy        359 PLCHKRFQKAFLKIFCIK 376

Db        466 TIFNLDFRRAFKKLLHFK 483


RESULT 9
A40491
alpha-1-adrenergic receptor - golden hamster
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 22-Jan-1993 #sequence_revision 22-Jan-1993 #text_change 09-Jul-2004
C;Accession: A40491
R;Cotecchia, S.; Schwinn, D.A.; Randall, R.R.; Lefkowitz, R.J.; Caron, M.G.; Kobilka, B.
Proc. Natl. Acad. Sci. U.S.A. 85, 7159-7163, 1988
A;Title: Molecular cloning and expression of the cDNA for the hamster alpha-1-adrenergic
A;Reference number: A40491; MUID:89017157; PMID:2845398
A;Accession: A40491
A;Molecule type: mRNA
A;Residues: 1-515 <COT>
A;Cross-references: UNIPROT:P18841; UNIPARC:UPI0000124FC9; GB:J04084; NID:g619407; PIDN:
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; transmembrane protein

  Query Match             19.9%;  Score 402.5;  DB 2;  Length 515;
  Best Local Similarity   28.4%;  Pred. No. 5.1e-26;
  Matches  107;  Conservative   83;  Mismatches  132;  Indels   55;  Gaps   14;

Qy          4 TNSTI-NLSLSTRVTLAFFM-SLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISD 61

Db         33 SNSTLPQLDVTRAISVGLVLGAFILFAI-VGNILVILSVACNRHLRTPTNYFIVNLAIAD 91

Qy         62 FFVGVISIPLYIP-HTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Db         92 LLLSFTVLPFSATLEVLGYWVLGRIFCDIWAAVDVLCCTASILSLCAISIDRYIGVRYSL 151

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVN-GPMILVSESWKDEGSECEPGFFSEWYILAITS 179

Db        152 QYPTLVTR-RKAILALLSVWVLSTVISIGPLLGWKEPAPNDDKEC--GVTEEPFYALFSS 208

Qy        180 FLEFVIP--VILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRS 237

Db        209 LGSFYIPLAVILVMY----------------CRVYIVAKRTTKNL-------EAGVMKE 244

Qy        238 LSASTEVPASFHSERQRRKSSLMFSSRTKMNS--NTIASKMGSFSQSDSVALHQREHVEL 295

Db        245 MSNSKELTLRIHSKNFHEDT--LSSTKAKGHNPRSSIAVKLFKFS--------------- 287

Qy        296 LRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNP 355

Db        288 -REKKAAKTLGIVVGMFILCWLPFFIALPLGSLFSTLKPPDAV-FKVVFWLGYFNSCLNP 345

Qy        356 LLYPLCHKRFQKAFLKI 372

Db        346 IIYPCSSKEFKRAFMRI 362


RESULT 10
A45121
alpha-1B adrenergic receptor - human
C;Species: Homo sapiens (man)
C;Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 09-Jul-2004
C;Accession: A45121; JC2332
R;Ramarao, C.S.; Denker, J.M.; Perez, D.M.; Gaivin, R.J.; Riek, R.P.; Graham, R.M.
J. Biol. Chem. 267, 21936-21945, 1992
A;Title: Genomic organization and expression of the human alpha 1B-adrenergic receptor.
A;Reference number: A45121; MUID:93016158; PMID:1328250
A;Accession: A45121
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-517 <RAM>
A;Cross-references: UNIPROT:P35368; UNIPARC:UPI0000149ED4; GB:M99590; NID:g178211
A;Note: sequence extracted from NCBI backbone (NCBIP:116785)
A;Note: this translation is not annotated in GenBank entry HUMADRENB, release 113.0 #da
R;Weinberg, D.H.; Trivedi, P.; Tan, C.P.; Mitra, S.; Perkins-Barrow, A.; Borkowski, D.;
Biochem. Biophys. Res. Commun. 201, 1296-1304, 1994
A;Title: Cloning, expression and characterization of human alpha adrenergic receptors a
A;Reference number: JC2331; MUID:94296402; PMID:8024574
A;Accession: JC2332
A;Molecule type: mRNA
A;Residues: 1-158,'P',160-244,'H',246-314,'F',316-380,382-517 <WEI>
A;Cross-references: UNIPARC:UPI00001778AA
C;Genetics:
A;Gene: GDB:ADRA1B
A;Cross-references: GDB:127901; OMIM:104220
A;Map position: 5q31.1-5q33.2
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; transmembrane protein
F;39-72/Domain: transmembrane #status predicted <TM1>
F;81-111/Domain: transmembrane #status predicted <TM2>
F;121-146/Domain: transmembrane #status predicted <TM3>
F;157-184/Domain: transmembrane #status predicted <TM4>
F;203-227/Domain: transmembrane #status predicted <TM5>
F;290-320/Domain: transmembrane #status predicted <TM6>
F;326-360/Domain: transmembrane #status predicted <TM7>

  Query Match             19.7%;  Score 399.5;  DB 2;  Length 517;
  Best Local Similarity   28.1%;  Pred. No. 9.2e-26;
  Matches  106;  Conservative   84;  Mismatches  132;  Indels   55;  Gaps   14;

Qy          4 TNSTI-NLSLSTRVTLAFFM-SLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISD 61

Db         33 SNSTLPQLDITRAISVGLVLGAFILFAI-VGNILVILSVACNRHLRTPTNYFIVNLAMAD 91

Qy         62 FFVGVISIPLYIP-HTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Db         92 LLLSFTVLPFSAALEVLGYWVLGRIFCDIWAAVDVLCCTASILSLCAISIDRYIGVRYSL 151

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVN-GPMILVSESWKDEGSECEPGFFSEWYILAITS 179

Db        152 QYPTLVTR-RKAILALLSVWVLSTVISIGPLLGWKEPAPNDDKEC--GVTEEPFYALFSS 208

Qy        180 FLEFVIP--VILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRS 237

Db        209 LGSFYIPLAVILVMY----------------CRVYIVAKRTTKNL-------EAGVMKE 244

Qy        238 LSASTEVPASFHSERQRRKSSLMFSSRTKMNS--NTIASKMGSFSQSDSVALHQREHVEL 295

Db        245 MSNSKELTLRIHSKNFHEDT--LSSTKAKGHNPRSSIAVKLFKFS--------------- 287

Qy        296 LRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNP 355

Db        288 -REKKAAKTLGIVVGMFILCWLPFFIALPLGSLFSTLKPPDAV-FKVVFWLGYFNSCLNP 345

Qy        356 LLYPLCHKRFQKAFLKI 372
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              ::||    | |::||::|
Db        346 IIYPCSSKEFKRAFVRI 362


RESULT 11
JC6178
serotonin receptor - Barnacle
N;Alternate names: 5-hydroxytryptamine receptor (5-HTR)
C;Species: Balanus amphitrite (barnacle)
C;Date: 11-Apr-1997 #sequence_revision 09-May-1997 #text_change 09-Jul-2004
C;Accession: JC6178
R;Kawahara, H.; Isoai, A.; Shizuri, Y.
Gene 184, 245-250, 1997
A;Title: Molecular cloning of a putative serotonin receptor gene from barnacle, Balanus
A;Reference number: JC6178; MUID:97183669; PMID:9031635
A;Accession: JC6178
A;Molecule type: DNA
A;Residues: 1-379 <KAW>
A;Cross-references: UNIPROT:Q93127; UNIPARC:UPI000012BA93; DDBJ:D83547; NID:g1507660; PI
C;Comment: This is a G-protein-coupled receptor.
C;Superfamily: octopamine receptor type I
C;Keywords: disulfide bond; neurotransmitter receptor; transmembrane protein

  Query Match             19.4%;  Score 393.5;  DB 2;  Length 379;
  Best Local Similarity   25.7%;  Pred. No. 2.1e-25;
  Matches   98;  Conservative   89;  Mismatches  160;  Indels   35;  Gaps    9;

Qy          2 PDTNSTI-----NLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLN 56
              |: |::          |   |     :  :    ::||:|||::    : ||   ::| ::
Db         14 PELNASAAPLDDERELGETVAATALLLAIILVTIVGNSLVIISVFTYRPLRSVQNFFVVS 73

Qy         57 LAISDFFVGVISIPLYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLS 115
              ||:|  | :  :|| : : |  :|  |  :|  ||| | | ||:|: |: :|: ||| :
Db         74 LAVADLTVALFVLPLNVAYRLLNQWLLGSYLCQMWLTCDILCCTSSILNLCVIALDRYWA 133

Qy        116 VSNAVSYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYIL 175
              ::: ::|  : | : :: |:: ||| |: ::: | :|     |  : :|  |   ::  :
Db        134 ITDPINYAQKRT-IRRVNTMIAAVWALSLVISVPPLLGWNDWPAQFTEDTPCTLTQERLF 192

Qy        176 AI-TSFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSS 234
               : :|    | ||:|:::     |:::  :|  |       |  || :          | ||
Db        193 VVYSSSGSFFIPLIIMSVVYAKIFFATKRR--LRERTRKLGTLAVPAP------PQRTSS 244

Qy        235 RRSLSASTEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQ----R 290
              |    |  |  ||   | :         |||    :|              :::||    :
Db        245 RP--LAELESSVASQEDETEPSPEPEPLSSRADKPAN------------GISVHQFIEEK 289

Qy        291 EHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFN 350
              : : | : |: |: | :::||| ||| |: |   :: | ::   |          || : |
Db        290 QRISLSKERKAARVLGVIMGVFVVCWLPFFLMYAIVPFCTNCAPPSQRVVDFVTWLGYVN 349

Qy        351 SFVNPLLYPLCHKRFQKAFLKI 372
              .| :||::| : :| |: || ::
Db        350 SSLNPIIYTIYNKDFRTAFSRL 371


RESULT 12
JC1525
alpha-1B-adrenergic receptor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 09-Jul-2004
C;Accession: JC1525; S08400
R;Gao, B.; Kunos, G.
Gene 131, 243-247, 1993
A;Title: Isolation and characterization of the gene encoding the rat alpha 1B adrengergi
A;Reference number: JC1525; MUID:94010315; PMID:8406017
A;Accession: JC1525
A;Status: translation not shown
A;Molecule type: DNA
A;Residues: 1-515 <GAO>
A;Cross-references: UNIPROT:P15823; UNIPARC:UPI0000170842; GB:L08610; NID:g202624; PIDN:
R;Voigt, M.M.; Kispert, J.; Chin, H.
Nucleic Acids Res. 18, 1053, 1990
A;Title: Sequence of a rat brain cDNA encoding an alpha-1B adrenergic receptor.
A;Reference number: S08400; MUID:90192094; PMID:2156222
A;Accession: S08400
A;Molecule type: mRNA
A;Residues: 1-202,'C',204-206,'C',208-305,'C',307-414,'QK',417-439,'C',441-483,'ATA',48
A;Cross-references: UNIPARC:UPI0000154B78; EMBL:X51585; NID:g55557; PIDN:CAA35934.1; PI
C;Genetics:
A;Introns: 317/1
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; transmembrane protein

  Query Match             19.4%;  Score 392.5;  DB 2;  Length 515;
  Best Local Similarity   28.1%;  Pred. No. 3.6e-25;
  Matches  106;  Conservative   83;  Mismatches  133;  Indels   55;  Gaps   14;

Qy          4 TNSTI-NLSLSTRVTLAFFM-SLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISD 61
              :|||:  | ::  :::   : : : ||| :|| ||||:   :::||  ::|| :||||:|
Db         33 SNSTLPQLDVTRAISVGLVLGAFILFAI-VGNILVILSVACNRHLRTPTNYFIVNLAIAD 91

Qy         62 FFVGVISIPLYIP-HTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
                :    :|       |  |  |:  |  |   | | ||||: ::  || |||: |  ::
Db         92 LLLSFTVLPFSATLEVLGYWVLGRIFCDIWAAVDVLCCTASILSLCAISIDRYIGVRYSL 151

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVN-GPMILVSESWKDEGSECEPGFFSEWYILAITS 179
              | |  |   | :  :::|||| ::: ||::   |   ::  ||  |   | :    :|
Db        152 QYPTLVTR-RKAILALLSVWVLSTVISIGPLLGWKEPAPNDDKEC--GVTEEPFYALFSS 208

Qy        180 FLEFVIP--VILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRS 237
              | ||  |||| |                |: :      : |:                :
Db        209 LGSFYIPLAVILVMY----------------CRVYIVAKRTTKNL-------EAGVMKE 244

Qy        238 LSASTEVPASFHSERQRRKSSLMFSSRTKMNS--NTIASKMGSFSQSDSVALHQREHVEL 295
              :| | |:    ||:     :  : |:: | ::  ::|| |:  ||
Db        245 MSNSKELTLRIHSKNFHEDT--LSSTKAKGHNPRSSIAVKLFKFS--------------- 287

Qy        296 LRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNP 355
              | :: ||:| |::|:| : | |: :   : | :|:   | :| ::: ||| :||| :||
Db        288 -REKKAAKTLGIVVGMFILSWLPFFIALPLGSLFSTLKPPDAV-FKVVFWLGYFNSCLNP 345

Qy        356 LLYPLCHKRFQKAFLKI 372
              ::||    | |::||::|
Db        346 IIYPCSSKEFKRAFMRI 362


RESULT 13
JT0530
muscarinic acetylcholine receptor M5 - human
C;Species: Homo sapiens (man)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 21-Jan-2000
C;Accession: JT0530
R;Bonner, T.I.; Young, A.C.; Brann, M.R.; Buckley, N.J.
Neuron 1, 403-410, 1988
A;Title: Cloning and expression of the human and rat m5 muscarinic acetylcholine recept
A;Reference number: JT0530; MUID:90166521; PMID:3272174
A;Accession: JT0530
A;Molecule type: DNA
A;Residues: 1-532 <BON>
A;Cross-references: UNIPARC:UPI00001778C4
C;Comment: Muscarinic acetylcholine receptors mediate many of the actions of the neurot
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; phosph
F;30-53/Domain: transmembrane #status predicted <TM1>
F;67-87/Domain: transmembrane #status predicted <TM2>
F;105-126/Domain: transmembrane #status predicted <TM3>
F;147-169/Domain: transmembrane #status predicted <TM4>
F;192-214/Domain: transmembrane #status predicted <TM5>
F;444-464/Domain: transmembrane #status predicted <TM6>
F;479-498/Domain: transmembrane #status predicted <TM7>
F;8,13/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             19.4%;  Score 392.5;  DB 2;  Length 532;
  Best Local Similarity   22.6%;  Pred. No. 3.7e-25;
  Matches  110;  Conservative   89;  Mismatches  156;  Indels  131;  Gaps   14;
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Qy          16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
Db          31 ITIAAVTAVVSLITIVGNVLVMISFKVNSQLKTVNNYYLLSLACADLISGIFSMNLYTTY 90

Qy          76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
Db          91 ILMGRWALGSLACDLWLALDYVASNASVMNLLVISFDRYFSITRPLTYRAKRTP--KRAG 148

Qy         135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
Db         149 IMIGLAWLISFILWAPAILCWQYLVGKRTVPLDECQIQFLSEPTITFGTAIAAFYIPVSV 208

Qy         190 VAYFNMNIY---------------------------------------------------- 198
Db         209 MTILYCRIYRETEKRTKDLADLQGSDSVTKAEKRKPAHRALFRSCLRCPRPTLAQRERNQ 268

Qy         199 --WSL--------------------W-KRDHLSRCQSHPG----------------LTAV 219
Db         269 ASWSSSRRSTSTTGKPSQATGPSANWAKAEQLTTCSSYPSSEDEDKPATDPVLQVVYKSQ 328

Qy         220 SSNICGHSFRGRLSSRRSLSASTE-----------VPASFHSERQRRKSSLMFSSRTKMN 268
Db         329 GKESPGEEFSAEETEETFVKAETEKSDYDTPNYLLSPAAAHRPKSQKCVAYKFRLVVKAD 388

Qy         269 SN-----------------TIASKMGS--FSQSDSVALHQREHVELLRARRLAKSLAILL 309
Db         389 GNQETNNGCHKVKIMPCPFPVAKEPSTKGLNPNPSHQMTKRKRVVLVKERKAAQTLSAIL 448

Qy         310 GVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAF 369
Db         449 LAFIITWTPYNIMVLVSTFCDKCV-PVTLWH-LGYWLCYVNSTVNPICYALCNRTFRKTF 506

Qy         370 -LKIFC 374
Db         507 KMLLLC 512
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RESULT 14
I51837
muscarinic receptor - rat
C;Species: Rattus sp. (rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 24-Nov-1999
C;Accession: I51837
R;Lai, J.; Smith, T.L.; Mei, L.; Ikeda, M.; Fujiwara, Y.; Gomez, J.; Halonen, M.; Roeske
Adv. Exp. Med. Biol. 287, 313-330, 1991
A;Title: The molecular properties of the M1 muscarinic receptor and its regulation of cy
A;Reference number: I51837; MUID:92101806; PMID:1759615
A;Accession: I51837
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-460 <RES>
A;Cross-references: UNIPARC:UPI0000046CE7; GB:S73971; NID:g241253; PIDN:AAB20705.1; PID:
C;Genetics:
A;Gene: m1
C;Superfamily: vertebrate rhodopsin

  Query Match   19.3%; Score 391.5; DB 2; Length 460;
  Best Local Similarity 25.8%; Pred. No. 3.8e-25;
  Matches 121; Conservative   84; Mismatches 149; Indels 115; Gaps   19;

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Qy           5 NSTINLSLSTRVT----------LAFF---MSLVAFAIMLGNALVILAFVVDKNLRHRSS 51
Db           2 NTSVPPAVSPNITVLAPGKGPWQVAFIGITTGLLSLATVTGNLLVLISFKVNTELKTVNN 61

Qy          52 YFFLNLAISDFFVGVISIPLYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISY 110
Db          62 YFLLSLACADLIIGTFSMNLYTTYLLMGHWALGTLACDLWLALDYVASNASVMNLLLISF 121

Qy         111 DRYLSVSNAVSYRTQHTGVLKIVTLMVAV-WVLAFLVNGPMILVSESWKDE----GSECE 165
Db         122 DRYFSVTRPLSYRAKRTP--RRAALMIGLAWLVSFVLWAPAILFWQYLVGERTVLAGQCY 179

Qy         166 PGFFSEWYILAITSFLEFVIPVILVAYFNMNIYWSLWKRD-----HLSRCQSH--PGLTA 218
Db         180 IQFLSQPIITFGTAMAAFYLPVTVMC----TLYWRIYRETENRARELAALQGSETPGKGG 235

Qy         219 VSSNICGHSFRGRLSSRRS---LSASTEVPA----------------SFHSERQRRKSSL 259
Db         236 GSSS----------SSERSQPGAEGSPESPPGRCCRCCRAPRLLQAYSWKEEEEEDEGSM 285

Qy         260 --MFSSRTKMNSNTIASKMGSFSQSDSVA------------------------------ 286
Db         286 ESLTSSEGEEPGSEVVIKM---PMVDSEAQAPTKQPPKSSPNTVKRPTKKGRDRGGKGQK 342

Qy         287 ------LHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWY 340
Db         343 PRGKEQLAKRKTFSLVKEKKAARTLSAILLAFILTWTPYNIMVLVSTFCKDCV-PETLW- 400

Qy         341 RIAFWLQWFNSFVNPLLYPLCHKRFQKAF-LKIFC---------IKKQP 379
Db         401 ELGYWLCYVNSTVNPMCYALCNKAFRDTFRLLLLCRWDKRRWRKIPKRP 449
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RESULT 15
A29514
muscarinic acetylcholine receptor M1 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 09-Jul-2004
C;Accession: A94518; A94293; A37121; A29514
R;Bonner, T.I.
submitted to GenBank, July 1987
A;Reference number: A94518
A;Accession: A94518
A;Molecule type: mRNA
A;Residues: 1-460 <BO1>
A;Cross-references: UNIPROT:P08482; UNIPARC:UPI0000046CE7
R;Bonner, T.I.; Buckley, N.J.; Young, A.C.; Brann, M.R.
Science 237, 527-532, 1987
A;Title: Identification of a family of muscarinic acetylcholine receptor genes.
A;Reference number: A94293; MUID:87263421; PMID:3037705
A;Accession: A94293
A;Molecule type: mRNA
A;Residues: 1-227;338-460 <BO2>
A;Cross-references: UNIPARC:UPI00001778CE; UNIPARC:UPI00001778CF
A;Experimental source: cerebral cortex
A;Note: only a part of the protein translation is given; none of the nucleotide sequenc
R;Kurtenbach, E.; Curtis, C.A.M.; Pedder, E.K.; Aitken, A.; Harris, A.C.M.; Hulme, E.C.
J. Biol. Chem. 265, 13702-13708, 1990
A;Title: Muscarinic acetylcholine receptors. Peptide sequencing identifies residues inv
A;Reference number: A37121; MUID:90337982; PMID:2380182
A;Accession: A37121
A;Status: preliminary
A;Molecule type: protein
A;Residues: 62-124 <KUR>
A;Cross-references: UNIPARC:UPI00001778D0
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; phosph
F;25-50/Domain: transmembrane #status predicted <TM1>
F;62-93/Domain: transmembrane #status predicted <TM2>
F;100-121/Domain: transmembrane #status predicted <TM3>
F;142-168/Domain: transmembrane #status predicted <TM4>
F;187-209/Domain: transmembrane #status predicted <TM5>
F;367-387/Domain: transmembrane #status predicted <TM6>
F;402-420/Domain: transmembrane #status predicted <TM7>
F;2,12/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match   19.3%; Score 391.5; DB 2; Length 460;
  Best Local Similarity 25.8%; Pred. No. 3.8e-25;
  Matches 121; Conservative   84; Mismatches 149; Indels 115; Gaps   19;

```
Qy           5 NSTINLSLSTRVT----------LAFF---MSLVAFAIMLGNALVILAFVVDKNLRHRSS 51
Db           2 NTSVPPAVSPNITVLAPGKGPWQVAFIGITTGLLSLATVTGNLLVLISFKVNTELKTVNN 61

Qy          52 YFFLNLAISDFFVGVISIPLYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISY 110
```

```
                 || |:|| :|  :|  |: ||  : |   |  |   |  ||  ||:   ||| |::|||:
Db         62 YFLLSLACADLIIGTFSMNLYTTYLLMGHWALGTLACDLWLALDYVASNASVMNLLLISF 121

Qy        111 DRYLSVSNAVSYRTQHTGVLKIVTLMVAV-WVLAFLVNGPMILVSESWKDE----GSECE 165
                 ||| ||:  :||| : |   :   ||: : |:::|::  | ||  :    |      :|
Db        122 DRYFSVTRPLSYRAKRTP--RRAALMIGLAWLVSFVLWAPAILFWQYLVGERTVLAGQCY 179

Qy        166 PGFFSEWYILAITSFLEFVIPVILVAYFNMNIYWSLWKRD-----HLSRCQSH--PGLTA 218
                 | |:  |   |:   | :|| ::      :|| :::        |:  |    ||
Db        180 IQFLSQPIITFGTAMAAFYLPVTVMC----TLYWRIYRETENRARELAALQGSETPGKGG 235

Qy        219 VSSNICGHSFRGRLSSRRS---LSASTEVPA---------------SFHSERQRRKSSL 259
                 ||:          || ||      | | |                |:  | :  : |:
Db        236 GSSS----------SSERSQPGAEGSPESPPGRCCRCCRAPRLLQAYSWKEEEEEDEGSM 285

Qy        260 --MFSSRTKMNSNTIASKMGSFSQSDSVA------------------------------ 286
                 : ||  :   : :  ||      || |
Db        286 ESLTSSEGEEPGSEVVIKM---PMVDSEAQAPTKQPPKSSPNTVKRPTKKGRDRGGKGQK 342

Qy        287 ------LHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWY 340
                    | :|:   |:: :: |::|: :|  | : | ||::  :| :|      |:::|
Db        343 PRGKEQLAKRKTFSLVKEKKAARTLSAILLAFILTWTPYNIMVLVSTFCKDCV-PETLW- 400

Qy        341 RIAFWLQWFNSFVNPLLYPLCHKRFQKAF-LKIFC---------IKKQP 379
                 : :|| : || |||: | ||:| |:  | | : |         | |:|
Db        401 ELGYWLCYVNSTVNPMCYALCNKAFRDTFRLLLLCRWDKRRWRKIPKRP 449
```

Search completed: March 28, 2006, 13:59:17
Job time : 42 secs

OM protein - protein search, using sw model

Run on: March 28, 2006, 13:51:30 ; Search time 233 Seconds
(without alignments)
1180.927 Million cell updates/sec

Title: US-10-616-088-2
Perfect score: 2024
Sequence: 1 MPDTNSTINLSLSTRVTLAF.....KIFCIKKQPLPSQHSRSVSS 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2024	100.0	390	1	HRH4_HUMAN	Q9h3n8 homo sapien
2	2024	100.0	390	2	Q4G0I6_HUMAN	Q4g0i6 homo sapien
3	2016	99.6	390	2	Q96LD9_HUMAN	Q96ld9 homo sapien
4	1436.5	71.0	390	2	Q8WNV9_PIG	Q8wnv9 sus scrofa
5	1413.5	69.8	391	2	Q91ZY1_RAT	Q91zy1 rattus norv
6	1377.5	68.1	391	2	Q91ZY2_MOUSE	Q91zy2 mus musculu
7	1318.5	65.1	389	2	Q91ZY3_CAVPO	Q91zy3 cavia porce
8	889	43.9	175	2	Q6J9J5_PANTR	Q6j9j5 pan troglod
9	882	43.6	174	2	Q6J9J4_9PRIM	Q6j9j4 gorilla gor
10	730	36.1	445	2	Q865E1_MACMU	Q865e1 macaca mula
11	729	36.0	445	1	HRH3_RAT	Q9qyn8 rattus norv
12	727	35.9	445	1	HRH3_MOUSE	P58406 mus musculu
13	727	35.9	445	2	Q540P3_MOUSE	Q540p3 mus musculu
14	727	35.9	445	2	Q5G535_PHOSU	Q5g535 phodopus su
15	726.5	35.9	445	1	HRH3_CAVPO	Q9ji35 cavia porce
16	724	35.8	445	1	HRH3_HUMAN	Q9y5n1 homo sapien
17	724	35.8	445	2	Q548M6_HUMAN	Q548m6 homo sapien
18	724	35.8	445	2	Q4QRI7_HUMAN	Q4qri7 homo sapien
19	722	35.7	413	2	Q541U0_RAT	Q541u0 rattus norv
20	716.5	35.4	414	2	Q4RKY3_TETNG	Q4rky3 tetraodon n
21	700.5	34.6	341	2	Q4RVG9_TETNG	Q4rvg9 tetraodon n
22	693.5	34.3	473	2	Q6ZM33_BRARE	Q6zm33 brachydanio
23	693	34.2	406	2	Q5G534_PHOSU	Q5g534 phodopus su
24	673	33.3	365	2	Q8WY01_HUMAN	Q8wy01 homo sapien
25	673	33.3	373	2	Q8WXZ9_HUMAN	Q8wxz9 homo sapien
26	563	27.8	344	2	Q5PPG3_RAT	Q5ppg3 rattus norv
27	488.5	24.1	301	2	Q8WY00_HUMAN	Q8wy00 homo sapien
28	488.5	24.1	309	2	Q8NI49_HUMAN	Q8ni49 homo sapien
29	440	21.7	401	2	Q4RLR2_TETNG	Q4rlr2 tetraodon n
30	432.5	21.4	475	2	Q5TLF2_9NEOP	Q5tlf2 papilio xut
31	432	21.3	639	1	ACM3_CHICK	P49578 gallus gall
32	430.5	21.3	477	1	OAR_HELVI	Q25188 heliothis v
33	430.5	21.3	527	2	Q5END7_LEPMA	Q5end7 lepomis mac
34	430	21.2	399	2	Q9NG02_APIME	Q9ng02 apis mellif
35	425.5	21.0	477	2	Q9BMA9_MAMBR	Q9bma9 mamestra br
36	425.5	21.0	639	2	Q5MBW9_COLLI	Q5mbw9 columba liv
37	421	20.8	584	2	Q61W39_CAEBR	Q61w39 caenorhabdi
38	417.5	20.6	587	2	Q8VH26_CAVPO	Q8vh26 cavia porce
39	416.5	20.6	490	2	Q7T286_BRARE	Q7t286 brachydanio
40	415	20.5	590	1	ACM3_PIG	P11483 sus scrofa
41	415	20.5	611	1	ACM3_CAEEL	Q9u7d5 caenorhabdi
42	413	20.4	590	1	ACM3_BOVIN	P41984 bos taurus
43	411	20.3	590	1	ACM3_HUMAN	P20309 homo sapien
44	411	20.3	590	1	ACM3_PONPY	Q9n2a2 pongo pygma
45	411	20.3	590	2	Q4QRI3_HUMAN	Q4qri3 homo sapien

ALIGNMENTS

RESULT 1
HRH4_HUMAN
ID HRH4_HUMAN STANDARD; PRT; 390 AA.
AC Q9H3N8; Q9GZQ0;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Histamine H4 receptor (HH4R) (GPRv53) (G-protein coupled receptor 105)
DE (GPCR105) (SP9144) (AXOR35).
GN Name=HRH4;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=20538417; PubMed=10973974; DOI=10.1074/jbc.M006480200;
RA Oda T., Morikawa N., Saito Y., Masuho Y., Matsumoto S.-I.;
RT "Molecular cloning and characterization of a novel type of histamine
RT receptor preferentially expressed in leukocytes.";
RL J. Biol. Chem. 275:36781-36786(2000).
RN [2]
RP NUCLEOTIDE SEQUENCE, AND CHARACTERIZATION.
RC TISSUE=Leukocyte;
RX MEDLINE=20568725; PubMed=11118334; DOI=10.1006/bbrc.2000.4008;
RA Nakamura T., Itadani H., Hidaka Y., Ohta M., Tanaka K.;
RT "Molecular cloning and characterization of a new human histamine
RT receptor, HH4R.";
RL Biochem. Biophys. Res. Commun. 279:615-620(2000).
RN [3]
RP NUCLEOTIDE SEQUENCE.
RA Jones P.G., Wu S., Betty M.;
RT "Cloning of a novel histamine receptor.";
RL Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
RN [4]
RP NUCLEOTIDE SEQUENCE, AND CHARACTERIZATION.
RC TISSUE=Bone marrow;
RX PubMed=11179434;
RA Liu C., Ma X.-J., Jiang X., Wilson S.J., Hofstra C.L., Blevitt J.,
RA Pyati J., Li X., Chai W., Carruthers N., Lovenberg T.W.;
RT "Cloning and pharmacological characterization of a fourth histamine
RT receptor (H4) expressed in bone marrow.";
RL Mol. Pharmacol. 59:420-426(2001).
RN [5]
RP NUCLEOTIDE SEQUENCE, AND CHARACTERIZATION.
RC TISSUE=Eosinophil;
RX MEDLINE=21104636; PubMed=11181941;
RA Morse K.L., Behan J., Laz T.M., West R.E. Jr., Greenfeder S.A.,
RA Anthes J.C., Umland S., Wan Y., Hipkin R.W., Gonsiorek W., Shin N.,
RA Gustafson E.L., Qiao X., Wang S., Hedrick J.A., Greene J., Bayne M.,
RA Monsma F.J. Jr.;
RT "Cloning and characterization of a novel human histamine receptor.";
RL J. Pharmacol. Exp. Ther. 296:1058-1066(2001).

```
RN   [6]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=21106320; PubMed=11179436;
RA   Zhu Y., Michalovich D., Wu H.-L., Tan K.B., Dytko G.M., Mannan I.J.,
RA   Boyce R., Alston J., Tierney L.A., Li X., Herrity N.C., Vawter L.,
RA   Sarau H.M., Ames R.S., Davenport C.M., Hieble P., Wilson S.,
RA   Bergsma D.J., Fitzgerald L.R.;
RT   "Cloning, expression, and pharmacological characterization of a novel
RT   human histamine receptor.";
RL   Mol. Pharmacol. 59:434-441(2001).
RN   [7]
RP   NUCLEOTIDE SEQUENCE.
RA   O'Reilly M.A.;
RT   "Identification of a histamine H4 receptor on human eosinophils - Role
RT   in eosinophil chemotaxis.";
RL   Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
RN   [8]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RA   Puhl H.L. III, Ikeda S.R., Aronstam R.S.;
RT   "cDNA clones of human proteins involved in signal transduction
RT   sequenced by the Guthrie cDNA resource center (www.cdna.org).";
RL   Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: The H4 subclass of histamine receptors could mediate the
CC       histamine signals in peripheral tissues. Displays a significant
CC       level of constitutive activity (spontaneous activity in the
CC       absence of agonist).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- TISSUE SPECIFICITY: Expressed primarily in the bone marrow and
CC       eosinophils. Shows preferential distribution in cells of
CC       immunological relevance such as T-cells, dendritic cells,
CC       monocytes, mast cells, neutrophils. Also expressed in a wide
CC       variety of peripheral tissues, including the heart, kidney, liver,
CC       lung, pancreas, skeletal muscle, prostate, small intestine,
CC       spleen, fetal liver and lymph node.
CC   -!- INDUCTION: Expression is either up-regulated or down-regulated
CC       upon activation of the lymphoid tissues and this regulation may
CC       depend on the presence of IL-10 or IL-13.
CC   -!- MISCELLANEOUS: Does not bind diphenhydramine, loratadine,
CC       ranitidine, cimetidine and chlorpheniramine. Shows modest affinity
CC       for dimaprit, impromidine, clobenpropit, thioperamide, burimamide
CC       clozapine, immepip and imetit. The order of inhibitory activity
CC       was imetit > clobenpropit > burimamide > thioperamide.
CC       Clobenpropit behaves as a partial agonist, dimaprit and
CC       impromidine show some agonist activity while clozapine behaves as
CC       a full agonist. Thioperamide shows inverse agonism (enhances cAMP
CC       activity). The order of inhibitory activity of histamine
CC       derivatives was Histamine > N-alpha-methylhistamine > R(-)-alpha-
CC       methylhistamine > S(+)-alpha-methylhistamine. Both N-alpha-
CC       methylhistamine > R(-)-alpha-methylhistamine behave as full
CC       agonists.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; AB044934; BAB13698.1; -; mRNA.
DR   EMBL; AB045370; BAB20091.1; -; mRNA.
DR   EMBL; AF307973; AAG32052.1; -; mRNA.
DR   EMBL; AF312230; AAK12081.1; -; mRNA.
DR   EMBL; AF329449; AAK43542.1; -; mRNA.
DR   EMBL; AF325356; AAL01684.1; -; mRNA.
DR   EMBL; AJ298292; CAC83493.1; -; mRNA.
DR   EMBL; AY136745; AAN01271.1; -; mRNA.
DR   PIR; JC7566; JC7566.
DR   Ensembl; ENSG00000134489; Homo sapiens.
DR   HGNC; HGNC:17383; HRH4.
DR   MIM; 606792; -.
DR   GO; GO:0016021; C:integral to membrane; NAS.
DR   GO; GO:0004969; F:histamine receptor activity; NAS.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Glycoprotein; Lipoprotein; Palmitate;
KW   Receptor; Transducer; Transmembrane.
FT   TOPO_DOM      1     19       Extracellular (Potential).
FT   TRANSMEM     20     40       1 (Potential).
FT   TOPO_DOM     41     52       Cytoplasmic (Potential).
FT   TRANSMEM     53     73       2 (Potential).
FT   TOPO_DOM     74     87       Extracellular (Potential).
FT   TRANSMEM     88    108       3 (Potential).
FT   TOPO_DOM    109    131       Cytoplasmic (Potential).
FT   TRANSMEM    132    152       4 (Potential).
FT   TOPO_DOM    153    172       Extracellular (Potential).
FT   TRANSMEM    173    193       5 (Potential).
FT   TOPO_DOM    194    304       Cytoplasmic (Potential).
FT   TRANSMEM    305    325       6 (Potential).
FT   TOPO_DOM    326    341       Extracellular (Potential).
FT   TRANSMEM    342    362       7 (Potential).
FT   TOPO_DOM    363    390       Cytoplasmic (Potential).
FT   LIPID       374    374       S-palmitoyl cysteine (Potential).
FT   CARBOHYD      5      5       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD      9      9       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID     87    164       By similarity.
FT   CONFLICT    138    138       A -> V (in Ref. 1).
FT   CONFLICT    206    206       H -> R (in Ref. 1).
FT   CONFLICT    253    253       Q -> R (in Ref. 1).
SQ   SEQUENCE   390 AA;  44496 MW;  C986B8AE7FF912C3 CRC64;

  Query Match           100.0%;  Score 2024;  DB 1;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.3e-135;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 2
Q4G0I6_HUMAN
ID   Q4G0I6_HUMAN PRELIMINARY;      PRT;   390 AA.
AC   Q4G0I6;
DT   13-SEP-2005 (TrEMBLrel. 31, Created)
DT   13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
DT   13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
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DE   Histamine H4 receptor.
GN   Name=HRH4;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Synthetic constructs;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Synthetic constructs;
RG   NIH MGC Project;
RL   Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC069136; AAH69136.1; -; mRNA.
KW   Receptor.
SQ   SEQUENCE   390 AA;  44496 MW;  C986B8AE7FF912C3 CRC64;

  Query Match             100.0%;  Score 2024;  DB 2;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-135;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 3
Q96LD9_HUMAN
ID   Q96LD9_HUMAN PRELIMINARY;      PRT;   390 AA.
AC   Q96LD9;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Histamine receptor H4.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=21106319; PubMed=11179435;
RA   Nguyen T., Shapiro D.A., George S.R., Setola V., Lee D.K., Cheng R.,
RA   Rauser L., Lee S.P., Lynch K.R., Roth B.L., O'Dowd B.F.;
RT   "Discovery of a novel member of the histamine receptor family.";
RL   Mol. Pharmacol. 59:427-433(2001).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AY008280; AAL09297.1; -; mRNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   390 AA;  44470 MW;  CC82B5D30D216C66 CRC64;

  Query Match             99.6%;  Score 2016;  DB 2;  Length 390;
  Best Local Similarity   99.7%;  Pred. No. 4.9e-135;
  Matches  389;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              | ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MADTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 4
Q8WNV9_PIG
ID   Q8WNV9_PIG  PRELIMINARY;      PRT;   390 AA.
AC   Q8WNV9;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Histamine H4 receptor.
OS   Sus scrofa (Pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC   Sus.
OX   NCBI_TaxID=9823;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22015261; PubMed=12020829; DOI=10.1016/S0167-4781(02)00236-1;
RA   Oda T., Matsumoto S., Masuho Y., Takasaki J., Matsumoto M.,
RA   Kamohara M., Saito T., Ohishi T., Soga T., Hiyama H., Matsushime H.,
RA   Furuichi K.;
RT   "cDNA cloning and characterization of porcine histamine H4 receptor.";
RL   Biochim. Biophys. Acta 1575:135-138(2002).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AB053300; BAB83078.1; -; mRNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   390 AA;  44483 MW;  BC8FD363A6F44D3F CRC64;

  Query Match             71.0%;  Score 1436.5;  DB 2;  Length 390;
  Best Local Similarity   72.9%;  Pred. No. 6.7e-94;
  Matches  283;  Conservative   30;  Mismatches   72;  Indels    3;  Gaps    3;

Qy          3 DTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDF 62
              |||  |   | |:||: ||| |||:|  ||||||:||||||||||||||||:|| ||||||||
Db          6 DTN-TNTLPLNTRIALAFLMSLLALVIMLGNAVVILAFVVDKNLRHRSNYFLLNLAISDF 64

Qy         63 FVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSY 122
              ||||||||||||||||:|      || |||  ||||||||||||||||:||| ||||||||
Db         65 FVGVISIPLYIPHTLFKWKLEDNICAFWLIIDYLLCTASVYNIVLISFDRYQSVSNAVSY 124

Qy        123 RTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSFLE 182
              ||||||:|||| ||| |||||||||:||:||||||:||    :|||||  |||:|||| | |
Db        125 RTQHTGILKIVALMVGVWVLAFLVHGPVILVSEAWKQGKQDCEPGFLKEWYVLAITLFFE 184

Qy        183 FVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSAST 242
              |: ||:||||||: |||||||| |||||||| ||| |||   |||||  | || |||
Db        185 FLAPVLLVAYFNLYIYWSLWKRGHLSRCQSHCGLTPVSSGSWGHSFRCGLFSRTSLSDPK 244

Qy        243 EVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLA 302
              |  || |||| ||||:| || ||:|:| | ||  |  | |||:||||:||:||||||:||
Db        245 EAAASLHSERPRRKSTLWFSLRTRMSSLT-ASNKGFLSHSDSLALHQKEHLELLRARKLA 303

Qy        303 KSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCH 362
              :||||||||||:||||||| ||  | | :   | :  |: |||||||| ||| ||||||
Db        304 RSLAILLGVFAICWAPYSLLTITRSVYPTNPFPSTAVYKFAFWLQWFNSCVNPFLYPLCH 363

Qy        363 KRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||||||||||:|||   | |:|| ||
Db        364 KRFQKAFLKIFCLKKQSTLS-HNRSTSS 390
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RESULT 5
Q91ZY1_RAT
ID   Q91ZY1_RAT  PRELIMINARY;      PRT;   391 AA.
AC   Q91ZY1;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Histamine H4 receptor.
GN   Name=Hrh4;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Sprague-Dawley;
RA   Liu C., Wilson S., Kuei C., Lovenberg T.W.;
RL   Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AF358860; AAK97381.1; -; mRNA.
DR   Ensembl; ENSRNOG00000016887; Rattus norvegicus.
DR   RGD; 620631; Hrh4.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   391 AA;  44023 MW;  C707BA6E39CFED41 CRC64;

  Query Match             69.8%;  Score 1413.5;  DB 2;  Length 391;
  Best Local Similarity   69.4%;  Pred. No. 2.9e-92;
  Matches  272;  Conservative   40;  Mismatches   77;  Indels    3;  Gaps    2;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              | ::| |  | |: :| ||| |||:|||| :|||:|||||| |:|||||:|||||||||
Db          1 MSESNGTDVLPLTAQVPLAFLMSLLAFAITIGNAVVILAFVADRNLRHRSNYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              |||||||||||||||||| |:||  ||:||| ||||||||||:||||||||| ||||||
Db         61 DFFVGVISIPLYIPHTLFNWNFGSGICMFWLITDYLLCTASVYSIVLISYDRYQSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGS--ECEPGFFSEWYILAIT 178
              || ||||:|||| |||||:|||||||||||| |:|||:  :  |||||| :||||||||
Db        121 RYRAQHTGILKIVAQMVAVWILAFLVNGPMILASDSWKNSTNTEECEPGFVTEWYILAIT 180

Qy        179 SFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSL 238
              :||||::|| || ||:: |||||||| |||| || |  | ||   ||| |  |: | ||
Db        181 AFLEFLLPVSLVVYFSVQIYWSLWKRGSLSRCPSHAGFIATSSRGTGHSRRTGLACRTSL 240

Qy        239 SASTEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRA 298
                |  || |||  | ||||: | || |: : || |:||| :|:|  ||||||||||
Db        241 PGLKEPAASLHSESPRGKSSLLVSLRTHMSGSIIAFKVGSFCRSESPVLHQREHVELLRG 300

Qy        299 RRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLY 358
              |:||:|||:||  ||:||||| ||||||| |     |||:|| |||||||||| :|| ||
Db        301 RKLARSLAVLLSAFAICWAPYCLFTIVLSTYRRGERPKSIWYSIAFWLQWFNSLINPFLY 360

Qy        359 PLCHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||:|||||| || |: ||| ||| ::||||
Db        361 PLCHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 392
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Db        361 PLCHRRFQKAFWKILCVTKQPAPSQ-TQSVSS 391


RESULT 6
Q91ZY2_MOUSE
ID   Q91ZY2_MOUSE PRELIMINARY;      PRT;   391 AA.
AC   Q91ZY2;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Histamine H4 receptor.
GN   Name=Hrh4;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=BALB/c;
RA   Liu C., Wilson S., Kuei C., Lovenberg T.W.;
RL   Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AF358859; AAK97380.1; -; mRNA.
DR   Ensembl; ENSMUSG00000037346; Mus musculus.
DR   MGI; MGI:2429635; Hrh4.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   GO; GO:0005887; C:integral to plasma membrane; IC.
DR   GO; GO:0005624; C:membrane fraction; IDA.
DR   GO; GO:0004969; F:histamine receptor activity; IDA.
DR   GO; GO:0006954; P:inflammatory response; TAS.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   391 AA;  44249 MW;  59EC73CB5214C5E0 CRC64;

  Query Match           68.1%;  Score 1377.5;  DB 2;  Length 391;
  Best Local Similarity   68.4%;  Pred. No. 1e-89;
  Matches  268;  Conservative   40;  Mismatches   81;  Indels    3;  Gaps    2;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              | ::|||  |  : :| ||| ||  |||||:|||:||||||||:||||||:|||||||||
Db          1 MSESNSTGILPPAAQVPLAFLMSSFAFAIMVGNAVVILAFVVDRNLRHRSNYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              || ||:|||||||||| || |:||  ||:||| ||||||||||||||||||||| ||||||
Db         61 DFLVGLISIPLYIPHVLFNWNFGSGICMFWLITDYLLCTASVYNIVLISYDRYQSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGS--ECEPGFFSEWYILAIT 178
              ||| ||||::|||  |||||:|||||||||||| |:|||:  :  :|||||  :|||||  ||
Db        121 SYRAQHTGIMKIVAQMVAVWILAFLVNGPMILASDSWKNSTNTKDCEPGFVTEWYILTIT 180

Qy        179 SFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSL 238
              |||::||| |||||: ||||||||  |||| || | :  ||:  ||  |  :: | |
Db        181 MLLEFLLPVISVAYFNVQIYWSLWKRRALSRCPSHAGFSTTSSSASGHLHRAGVACRTSN 240

Qy        239 SASTEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRA 298
                 |  || |||  |||||:: | |+ |||:  | |:||| :|:| || |||: ||||
Db        241 PGLKESAASRHSESPRRKSSILVSLRTHMNSSITAFKVGSFWRSESAALRQREYAELLRG 300

Qy        299 RRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLY 358
              |:||:||||||  ||:||||| ||||||| |     |||||| |||||||||||||| ||
Db        301 RKLARSLAILLSAFAICWAPYCLFTIVLSTYPRTERPKSVWYSIAFWLQWFNSFVNPFLY 360

Qy        359 PLCHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||:|||||| || |: |||  || ::||||


Db        361 PLCHRRFQKAFWKILCVTKQPALSQ-NQSVSS 391


RESULT 7
Q91ZY3_CAVPO
ID   Q91ZY3_CAVPO PRELIMINARY;      PRT;   389 AA.
AC   Q91ZY3;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Histamine H4 receptor.
OS   Cavia porcellus (Guinea pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
OC   Hystricognathi; Caviidae; Cavia.
OX   NCBI_TaxID=10141;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Liu C., Wilson S., Kuei C., Lovenberg T.W.;
RL   Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AF358858; AAK97379.1; -; mRNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   389 AA;  44512 MW;  51AF32FD6F1C3E4F CRC64;

  Query Match           65.1%;  Score 1318.5;  DB 2;  Length 389;
  Best Local Similarity   65.4%;  Pred. No. 1.6e-85;
  Matches  253;  Conservative   48;  Mismatches   83;  Indels    3;  Gaps    3;

Qy          5 NSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFV 64
              |||| |: | :::| | ||:| |||||| :|||||:||:|||||||:||||||||:||||
Db          5 NSTIALT-SIKISLTFLMSLLAIAIMLGNVVVILAFIVDRNLRHRSNYFFLNLAIADFFV 63

Qy         65 GVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRT 124
              | |:|||||| :|  |  ||: ||||| ||||||||||||||||||||| |||||| ||
Db         64 GAIAIPLYIPSSLTYWTSGKQACVFWLITDYLLCTASVYNIVLISYDRYQSVSNAVWYRA 123

Qy        125 QHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSFLEFV 184
              ||:|  || | |||||: :|: ||||||:|:||::  :||||||  :||    || |||:
Db        124 QHSGTWKIATQMVAVWIFSFMTNGPMILISDSWQNSTTECEPGFLKKWYFALPTSLLEFL 183

Qy        185 IPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTA-VSSNICGHSFRGRLSSRRSLSASTE 243
              ||::|||||: :|||||||: |||| ||| | :  ||:  ||| |    || :| |  |
Db        184 IPILLVAYFSAHIYWSLWKREKLSRCLSHPVLPSDSSSSDHGHSCRQDPDSRATLPARKE 243

Qy        244 VPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAK 303
              ||  |:: ||||||:|| |   ||| ||||||  | |||:|| ||||:|| |||:|||
Db        244 TTASLGSDKSRRKSSLLFSIRAYKNSNVIASKMGFLSHSDSLALQQREHIELFRARKLAK 303

Qy        304 SLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHK 363
              ||||||  ||:|||||| |:: ||:  ||  ||  |||||||||||| |||||||
Db        304 SLAILLAAFAICWAPYSLTTVIYSFFPERNLTKSTWYHTAFWLQWFNSFVNPFLYPLCHK 363

Qy        364 RFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              |||||||| :::|  |  |:||:|:
Db        364 RFQKAFLKILPVRRQSTP-PHNRSIST 389
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RESULT 8
Q6J9J5_PANTR
ID   Q6J9J5_PANTR PRELIMINARY;      PRT;   175 AA.
AC   Q6J9J5;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Histamine receptor H4 subtype (Fragment).
OS   Pan troglodytes (Chimpanzee).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Pan.
OX   NCBI_TaxID=9598;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   PubMed=15123584; DOI=10.1101/gr.1891104;
RA   Zhang J., Wang X., Podlaha O.;
RT   "Testing the chromosomal speciation hypothesis for humans and
RT   chimpanzees.";
RL   Genome Res. 14:845-851(2004).
DR   EMBL; AY561469; AAT45507.1; -; Genomic_DNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
FT   NON_TER       1      1
FT   NON_TER     175    175
SQ   SEQUENCE   175 AA;  19825 MW;  E5961FDAC315182F CRC64;

  Query Match             43.9%;  Score 889;  DB 2;  Length 175;
  Best Local Similarity   97.7%;  Pred. No. 2.1e-55;
  Matches  171;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        206 HLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKSSLMFSSRT 265
              ||||||||||||||||||||||||||||||||||||||||||| |||||| ||||||||||
Db          1 HLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASLHSERQRXKSSLMFSSRT 60

Qy        266 KMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIV 325
              ||:|||||:||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 KMSSNTIAAKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIV 120

Qy        326 LSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFCIKKQPL 380
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 LSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFCIKKQPL 175


RESULT 9
Q6J9J4_9PRIM
ID   Q6J9J4_9PRIM PRELIMINARY;      PRT;   174 AA.
AC   Q6J9J4;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Histamine receptor H4 subtype (Fragment).
OS   Gorilla gorilla (gorilla).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Gorilla.
OX   NCBI_TaxID=9593;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   PubMed=15123584; DOI=10.1101/gr.1891104;
RA   Zhang J., Wang X., Podlaha O.;
RT   "Testing the chromosomal speciation hypothesis for humans and
RT   chimpanzees.";
RL   Genome Res. 14:845-851(2004).
DR   EMBL; AY561470; AAT45508.1; -; Genomic_DNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR008102; Histamnrecept_H4.
DR   PANTHER; PTHR19266:SF82; Histamnrecept_H4; 1.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01726; HISTAMINEH4R.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
FT   NON_TER       1      1
FT   NON_TER     174    174
SQ   SEQUENCE   174 AA;  19713 MW;  4038B74734A785F5 CRC64;

  Query Match             43.6%;  Score 882;  DB 2;  Length 174;
  Best Local Similarity   97.1%;  Pred. No. 6.5e-55;
  Matches  169;  Conservative    2;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        206 HLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKSSLMFSSRT 265
              ||||||||||| |||||||||||||||||||||||| ||||| ||||||||||||||||||
Db          1 HLSRCQSHPGLTGVSSNICGHSFRGRLSSRRSLSASAEVPASLHSERQRRKSSLMFSSRT 60

Qy        266 KMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIV 325
              ||:|||||:||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 KMSSNTIAAKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIV 120

Qy        326 LSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFCIKKQP 379
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 LSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFCIKKQP 174


RESULT 10
Q865E1_MACMU
ID   Q865E1_MACMU PRELIMINARY;      PRT;   445 AA.
AC   Q865E1;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Histamine receptor H3.
GN   Name=HRH3;
OS   Macaca mulatta (Rhesus macaque).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC   Cercopithecidae; Cercopithecinae; Macaca.
OX   NCBI_TaxID=9544;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Yao B.B., Sharma R., Cassar S., Esbenshade T.A., Hancock A.A.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AY231164; AAO63757.1; -; mRNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0004969; F:histamine receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR003980; H3_receptor.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01471; HISTAMINEH3R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
```

```
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   445 AA;  48591 MW;  E79440A4EC09CA8C CRC64;

  Query Match             36.1%;  Score 730;  DB 2;  Length 445;
  Best Local Similarity   39.2%;  Pred. No. 1.1e-43;
  Matches  168;  Conservative   47;  Mismatches  132;  Indels   82;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :     ||  |:|:  | :|||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGNT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY----------------------------------WSLWKRD 205
              ||  | : | :||::||                                  |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAGGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH------------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQ 253
              |       |            | ||:     | |      ||  | |  || | |     :
Db        266 HGEAMPLHRYGVGEAAAGAEAGETALGGGGGGGSAASPTSSSGSSSRGTERPRSLKRGSK 325

Qy        254 RRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFA 313
                ||     | || |        ||:|             | | |::||||:::: :|
Db        326 PSASSASLEKRMKMVSQ-------SFTQ----------RFRLSRDRKVAKSLAVIVSIFG 368

Qy        314 VCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIF 373
              :|||||:|  |: :       |   ||  :||| | || |||:|||||  |::|| |:
Db        369 LCWAPYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLL 427

Qy        374 C---IKKQP 379
              |   :| ||
Db        428 CPQKLKIQP 436


RESULT 11
HRH3_RAT
ID   HRH3_RAT       STANDARD;      PRT;   445 AA.
AC   Q9QYN8; Q9QYN6; Q9QYN7; Q9QYN9;
DT   28-FEB-2003 (Rel. 41, Created)
DT   28-FEB-2003 (Rel. 41, Last sequence update)
DT   10-MAY-2005 (Rel. 47, Last annotation update)
DE   Histamine H3 receptor (HH3R).
GN   Name=Hrh3;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE (ISOFORM 1).
RC   TISSUE=Hypothalamus;
RX   MEDLINE=20330707; PubMed=10869375;
RA   Lovenberg T.W., Pyati J., Chang H., Wilson S.J., Erlander M.G.;
RT   "Cloning of rat histamine H3 receptor reveals distinct species
RT   pharmacological profiles.";
RL   J. Pharmacol. Exp. Ther. 293:771-778(2000).
RN   [2]
RP   NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).
RC   TISSUE=Corpus striatum;
RX   MEDLINE=21016732; PubMed=11130725; DOI=10.1038/35048583;
RA   Morisset S., Rouleau A., Ligneau X., Gbahou F., Tardivel-Lacombe J.,
RA   Stark H., Schunack W., Ganellin C.R., Schwartz J.-C., Arrang J.-M.;
RT   "High constitutive activity of native H3 receptors regulates histamine
RT   neurons in brain.";
RL   Nature 408:860-864(2000).
RN   [3]
RP   NUCLEOTIDE SEQUENCE (ISOFORMS 1; 2; 3 AND 4).
RA   Itadani H., Takimura T., Nakamura T., Ohta M.;
RT   "Cloning of a novel G protein-coupled receptor.";
RL   Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   TISSUE SPECIFICITY.
RX   MEDLINE=99278519; PubMed=10347254;
RA   Lovenberg T.W., Roland B.L., Wilson S.J., Jiang X., Pyati J.,
RA   Huvar A., Jackson M.R., Erlander M.G.;
RT   "Cloning and functional expression of the human histamine H3
RT   receptor.";
RL   Mol. Pharmacol. 55:1101-1107(1999).
CC   -!- FUNCTION: The H3 subclass of histamine receptors could mediate the
CC       histamine signals in CNS and peripheral nervous system. Signals
CC       through the inhibition of adenylate cyclase and displays high
CC       constitutive activity (spontaneous activity in the absence of
CC       agonist).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=4;
CC         Comment=Additional isoforms seem to exist;
CC       Name=1; Synonyms=H3L;
CC         IsoId=Q9QYN8-1; Sequence=Displayed;
CC       Name=2; Synonyms=H3S;
CC         IsoId=Q9QYN8-2; Sequence=VSP_001887;
CC       Name=3;
CC         IsoId=Q9QYN8-3; Sequence=VSP_001888;
CC       Name=4;
CC         IsoId=Q9QYN8-4; Sequence=VSP_001888, VSP_001889;
CC   -!- TISSUE SPECIFICITY: Expressed abundantly in brain, most notably
CC       throughout the thalamus, the ventromedial hypothalamus and the
CC       caudate nucleus. Isoform 1 is largely predominant in all tissues.
CC   -!- MISCELLANEOUS: Proxyfan acts as a potent neutral antagonist while
CC       thioperamide, ciproxifan and FUB465 act as potent inverse
CC       agonists.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; AF237919; AAF82086.1; -; mRNA.
DR   EMBL; AY009370; AAK02069.1; -; mRNA.
DR   EMBL; AB015646; BAA88765.1; -; mRNA.
DR   EMBL; AB015646; BAA88766.1; -; mRNA.
DR   EMBL; AB015646; BAA88767.1; -; mRNA.
DR   EMBL; AB015646; BAA88768.1; -; mRNA.
DR   Ensembl; ENSRNOG00000008080; Rattus norvegicus.
DR   RGD; 620630; Hrh3.
DR   GO; GO:0004969; F:histamine receptor activity; IDA.
DR   GO; GO:0007194; P:negative regulation of adenylate cyclase ac. . .; IDA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR003980; H3_receptor.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01471; HISTAMINEH3R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   Alternative splicing; G-protein coupled receptor; Glycoprotein;
KW   Receptor; Transducer; Transmembrane.
FT   TOPO_DOM      1     39       Extracellular (Potential).
FT   TRANSMEM     40     60       Potential.
FT   TOPO_DOM     61     70       Cytoplasmic (Potential).
FT   TRANSMEM     71     91       Potential.
FT   TOPO_DOM     92    108       Extracellular (Potential).
FT   TRANSMEM    109    129       Potential.
FT   TOPO_DOM    130    156       Cytoplasmic (Potential).
FT   TRANSMEM    157    177       Potential.
FT   TOPO_DOM    178    196       Extracellular (Potential).
FT   TRANSMEM    197    217       Potential.
FT   TOPO_DOM    218    359       Cytoplasmic (Potential).
FT   TRANSMEM    360    380       Potential.
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```
FT   TOPO_DOM    381    396       Extracellular (Potential).
FT   TRANSMEM    397    417       Potential.
FT   TOPO_DOM    418    445       Cytoplasmic (Potential).
FT   COMPBIAS     20     23       Poly-Ala.
FT   CARBOHYD     11     11       N-linked (GlcNAc. . .) (Potential).
FT   VARSPLIC    274    321       Missing (in isoform 3 and isoform 4).
FT                                /FTId=VSP_001888.
FT   VARSPLIC    274    305       Missing (in isoform 2).
FT                                /FTId=VSP_001887.
FT   VARSPLIC    393    445       WYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQKLK
FT                                VQPHGSLEQCWK -> CVERLGKLEASLLLPLWMFSGRWRR
FT                                RKHVCELDVPWMFNQERQNCRGARGWIGRCGLPRPPPSVLQ
FT                                LPAEPRQLLLPAPPPGLGRWPCPACPVCTIRIWGWVVMG
FT                                (in isoform 4).
FT                                /FTId=VSP_001889.
SQ   SEQUENCE   445 AA;  48588 MW;  63DFEFC21758FE5B CRC64;

  Query Match             36.0%;  Score 729;  DB 1;  Length 445;
  Best Local Similarity   39.1%;  Pred. No. 1.3e-43;
  Matches  166;  Conservative   54;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              |  :    ||  |:|:  | :||||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |  |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  | :
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |         ||: |  : : | |  |  :|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAGPGVEAGEAALGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGRCIP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 12
HRH3_MOUSE
ID   HRH3_MOUSE     STANDARD;      PRT;   445 AA.
AC   P58406;
DT   28-FEB-2003 (Rel. 41, Created)
DT   28-FEB-2003 (Rel. 41, Last sequence update)
DT   10-MAY-2005 (Rel. 47, Last annotation update)
DE   Histamine H3 receptor (HH3R).
GN   Name=Hrh3;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=CD-1;
RA   Coge F., Rique H., Levacher B., Leopold O., Guenin S.-P., Boutin J.A.,
RA   Galizzi J.-P.;
RT   "Cloning of mouse histamine H3 receptor.";
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: The H3 subclass of histamine receptors could mediate the
CC       histamine signals in CNS and peripheral nervous system. Signals
CC       through the inhibition of adenylate cyclase and displays high
CC       constitutive activity (spontaneous activity in the absence of
CC       agonist) (By similarity).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; AY044153; AAK72406.1; -; mRNA.
DR   Ensembl; ENSMUSG00000039059; Mus musculus.
DR   MGI; MGI:2139279; Hrh3.
DR   GO; GO:0016021; C:integral to membrane; TAS.
DR   InterPro; IPR000276; GPCR_Rhodopsn.
DR   InterPro; IPR003980; H3_receptor.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01471; HISTAMINEH3R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Glycoprotein; Receptor; Transducer;
KW   Transmembrane.
FT   TOPO_DOM     1     39       Extracellular (Potential).
FT   TRANSMEM     40    60       Potential.
FT   TOPO_DOM     61    70       Cytoplasmic (Potential).
FT   TRANSMEM     71    91       Potential.
FT   TOPO_DOM     92    108      Extracellular (Potential).
FT   TRANSMEM     109   129      Potential.
FT   TOPO_DOM     130   156      Cytoplasmic (Potential).
FT   TRANSMEM     157   177      Potential.
FT   TOPO_DOM     178   196      Extracellular (Potential).
FT   TRANSMEM     197   217      Potential.
FT   TOPO_DOM     218   359      Cytoplasmic (Potential).
FT   TRANSMEM     360   380      Potential.
FT   TOPO_DOM     381   396      Extracellular (Potential).
FT   TRANSMEM     397   417      Potential.
FT   TOPO_DOM     418   445      Cytoplasmic (Potential).
FT   COMPBIAS     20    23       Poly-Ala.
FT   CARBOHYD     11    11       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   445 AA;  48541 MW;  B8D406E29E1F3C5F CRC64;

  Query Match             35.9%;  Score 727;  DB 1;  Length 445;
  Best Local Similarity   38.8%;  Pred. No. 1.8e-43;
  Matches  165;  Conservative   54;  Mismatches  132;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              |  :    ||  |:|:  | :||||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |  |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  | :
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |         ||:   : : | |  |  :|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAGPGVETGEAGLGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
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                ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :      |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 13
Q540P3_MOUSE
ID   Q540P3_MOUSE PRELIMINARY;      PRT;   445 AA.
AC   Q540P3;
DT   13-SEP-2005 (TrEMBLrel. 31, Created)
DT   13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
DT   13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
DE   Histamine H3 receptor.
GN   Name=Hrh3;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=C57BL/6J; TISSUE=Brain;
RX   MEDLINE=22592891; PubMed=12706455; DOI=10.1016/S0014-2999(03)01635-2;
RA   Chen J., Liu C., Lovenberg T.W.;
RT   "Molecular and pharmacological characterization of the mouse histamine
RT   H(3) receptor.";
RL   Eur. J. Pharmacol. 467:57-65(2003).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AY142145; AAN34941.1; -; mRNA.
DR   MGI; MGI:2139279; Hrh3.
DR   GO; GO:0016021; C:integral to membrane; TAS.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR003980; H3_receptor.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01471; HISTAMINEH3R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   445 AA;  48541 MW;  B8D406E29E1F3C5F CRC64;

  Query Match           35.9%;  Score 727;  DB 2;  Length 445;
  Best Local Similarity   38.8%;  Pred. No. 1.8e-43;
  Matches  165;  Conservative   54;  Mismatches  132;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :|||||:|||| | :|| ::::| ||||||||  ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  | |||||||: || ||   ||:         ||  |   ||  || |   | |
Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  | :
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |   |          ||:    : : | |  |  :|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAGPGVETGEAGLGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :      |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 14
Q5G535_PHOSU
ID   Q5G535_PHOSU PRELIMINARY;      PRT;   445 AA.
AC   Q5G535;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   Histamine H3 receptor long form.
OS   Phodopus sungorus (Striped hairy-footed hamster) (Djungarian hamster).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muridae; Cricetinae; Phodopus.
OX   NCBI_TaxID=10044;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   PubMed=15618354; DOI=10.1210/en.2004-1452;
RA   Barrett P., Ross A.W., Balik A., Littlewood P.A., Mercer J.G.,
RA   Moar K.M., Sallmen T., Kaslin J., Panula P., Schuhler S., Ebling F.J.,
RA   Ubeaud C., Morgan P.J.;
RT   "Photoperiodic Regulation of Histamine H3 Receptor and VGF Messenger
RT   Ribonucleic Acid in the Arcuate Nucleus of the Siberian Hamster.";
RL   Endocrinology 146:1930-1939(2005).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein (By similarity).
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
DR   EMBL; AY855070; AAW57886.1; -; mRNA.
DR   GO; GO:0016021; C:integral to membrane; IEA.
DR   GO; GO:0004969; F:histamine receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   GO; GO:0001584; F:rhodopsin-like receptor activity; IEA.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; IEA.
DR   GO; GO:0007165; P:signal transduction; IEA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR003980; H3_receptor.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01471; HISTAMINEH3R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   G-protein coupled receptor; Receptor; Transducer; Transmembrane.
SQ   SEQUENCE   445 AA;  48488 MW;  DD8969E9D192BF22 CRC64;

  Query Match           35.9%;  Score 727;  DB 2;  Length 445;
  Best Local Similarity   39.3%;  Pred. No. 1.8e-43;
  Matches  167;  Conservative   51;  Mismatches  133;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  | |:  | :||||||:|||| | :|| ::::| ||||||||  ||   ||
Db         30 SAAWTAVLAALMGLLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  | |||||||: || ||   ||:         ||  |   ||  || |   | |
Db        150 RRAVQKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  | |
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAGPEPPPDAQPSPPPAPPSCWGCWPRG 265
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Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |         ||: |    : | |  |  :|  | | |:        |    |
Db        266 HGEAMPLHRYGVGEAGPGVEAGEVALGGGSGGGAAASPTSSSGSS-------SRGAERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCIP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 15
HRH3_CAVPO
ID   HRH3_CAVPO     STANDARD;      PRT;   445 AA.
AC   Q9JI35; Q9JI36;
DT   28-FEB-2003 (Rel. 41, Created)
DT   28-FEB-2003 (Rel. 41, Last sequence update)
DT   10-MAY-2005 (Rel. 47, Last annotation update)
DE   Histamine H3 receptor (HH3R).
GN   Name=HRH3;
OS   Cavia porcellus (Guinea pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
OC   Hystricognathi; Caviidae; Cavia.
OX   NCBI_TaxID=10141;
RN   [1]
RP   NUCLEOTIDE SEQUENCE (ISOFORMS LONG AND SHORT).
RC   TISSUE=Brain;
RX   MEDLINE=20218440; PubMed=10757514;
RA   Tardivel-Lacombe J., Rouleau A., Heron A., Morisset S., Pillot C.,
RA   Cochois V., Schwartz J.-C., Arrang J.-M.;
RT   "Cloning and cerebral expression of the guinea pig histamine H3
RT   receptor: evidence for two isoforms.";
RL   NeuroReport 11:755-759(2000).
CC   -!- FUNCTION: The H3 subclass of histamine receptors could mediate the
CC       histamine signals in CNS and peripheral nervous system. Signals
CC       through the inhibition of adenylate cyclase and displays high
CC       constitutive activity (spontaneous activity in the absence of
CC       agonist).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=Long; Synonyms=H3L;
CC         IsoId=Q9JI35-1; Sequence=Displayed;
CC       Name=Short; Synonyms=H3S;
CC         IsoId=Q9JI35-2; Sequence=VSP_001880;
CC   -!- TISSUE SPECIFICITY: Expressed widely and abundantly throughout the
CC       brain. Highly expressed in discrete neuronal populations such as
CC       pyramidal cells in cerebral cortex or cerebellar Purkinje cells.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; AF267537; AAF78947.1; -; mRNA.
DR   EMBL; AF267538; AAF78950.1; -; mRNA.
DR   InterPro; IPR000276; GPCR_Rhodpsn.
DR   InterPro; IPR003980; H3_receptor.
DR   Pfam; PF00001; 7tm_1; 1.
DR   PRINTS; PR00237; GPCRRHODOPSN.
DR   PRINTS; PR01471; HISTAMINEH3R.
DR   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR   PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW   Alternative splicing; G-protein coupled receptor; Glycoprotein;
KW   Receptor; Transducer; Transmembrane.
FT   TOPO_DOM      1     40       Extracellular (Potential).
FT   TRANSMEM     41     61       Potential.
FT   TOPO_DOM     62     71       Cytoplasmic (Potential).
FT   TRANSMEM     72     92       Potential.
FT   TOPO_DOM     93    109       Extracellular (Potential).
FT   TRANSMEM    110    130       Potential.
FT   TOPO_DOM    131    157       Cytoplasmic (Potential).
FT   TRANSMEM    158    178       Potential.
FT   TOPO_DOM    179    197       Extracellular (Potential).
FT   TRANSMEM    198    218       Potential.
FT   TOPO_DOM    219    359       Cytoplasmic (Potential).
FT   TRANSMEM    360    380       Potential.
FT   TOPO_DOM    381    398       Extracellular (Potential).
FT   TRANSMEM    399    419       Potential.
FT   TOPO_DOM    420    445       Cytoplasmic (Potential).
FT   COMPBIAS     20     24       Poly-Ala.
FT   CARBOHYD     11     11       N-linked (GlcNAc. . .) (Potential).
FT   VARSPLIC    276    305       Missing (in isoform Short).
FT                                /FTId=VSP_001880.
SQ   SEQUENCE   445 AA;  48735 MW;  BAE206A3887189A0 CRC64;

  Query Match           35.9%;  Score 726.5;  DB 1;  Length 445;
  Best Local Similarity 39.9%;  Pred. No. 1.9e-43;
  Matches  170;  Conservative   55;  Mismatches  124;  Indels   77;  Gaps   11;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :|||||:|||| | :|| ::::| |||||||| ||| || .
Db         31 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGVFCIP 90

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:||:||||||||:|||: ||||| |
Db         91 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSVFNIVLISYDRFLSVTRAVSYRAQQGDT 150

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  || |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        151 RRAVRKMVLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 206

Qy        182 EFVIPVILVAYFNMNIYWSLWKR--------------DHLSRCQSH-------------- 213
              ||  | : | :||::|| :: :|              | |   ||
Db        207 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGAREAGPDPLPEAQSSPPQPPPGCWGCWPK 266

Qy        214 -----------------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRK 256
                              ||.|  : : | |  |  :|  | | |:        |    |
Db        267 GQGESMPLHRYGVGEAGPGAEAGEAALGGGS--GAAASPTSSSGSS-------SRGTERP 317

Qy        257 SSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCW 316
              ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :||
Db        318 RSLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCW 371

Qy        317 APYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC-- 374
              |||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
Db        372 APYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQ 430

Qy        375 -IKKQP 379
               :| ||
Db        431 KLKVQP 436


Search completed: March 28, 2006, 13:58:30
Job time : 235 secs
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GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: March 28, 2006, 13:58:45 ; Search time 48 Seconds
(without alignments)
671.740 Million cell updates/sec

Title: US-10-616-088-2
Perfect score: 2024
Sequence: 1 MPDTNSTINLSLSTRVTLAF.....KIFCIKKQPLPSQHSRSVSS 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2024	100.0	390	2	US-09-414-010-2	Sequence 2, Appli
2	2024	100.0	390	2	US-09-812-216-2	Sequence 2, Appli
3	2024	100.0	390	2	US-09-875-076-14	Sequence 14, Appl
4	730	36.1	445	2	US-10-453-106-2	Sequence 2, Appli
5	729	36.0	445	2	US-09-165-543-5	Sequence 5, Appli
6	729	36.0	445	2	US-09-891-053-25	Sequence 25, Appl
7	729	36.0	445	2	US-10-453-106-3	Sequence 3, Appli
8	724	35.8	445	1	US-08-985-090-2	Sequence 2, Appli
9	724	35.8	445	2	US-09-165-543-2	Sequence 2, Appli
10	724	35.8	445	2	US-09-167-354-7	Sequence 7, Appli
11	724	35.8	445	2	US-09-642-855-7	Sequence 7, Appli
12	724	35.8	445	2	US-09-642-514-7	Sequence 7, Appli
13	724	35.8	445	2	US-09-642-852-7	Sequence 7, Appli
14	724	35.8	445	2	US-10-453-106-1	Sequence 1, Appli
15	724	35.8	449	2	US-09-949-016-10930	Sequence 10930, A
16	724	35.8	453	2	US-09-891-053-20	Sequence 20, Appl
17	722	35.7	413	2	US-09-891-053-1	Sequence 1, Appli
18	632	31.2	351	2	US-09-524-162-2	Sequence 2, Appli
19	593	29.3	362	1	US-08-985-090-5	Sequence 5, Appli
20	593	29.3	362	2	US-09-165-543-32	Sequence 32, Appl
21	434.5	21.5	355	1	US-08-118-270-11	Sequence 11, Appl
22	434.5	21.5	355	4	PCT-US93-08528-11	Sequence 11, Appl
23	416	20.6	348	1	US-08-118-270-13	Sequence 13, Appl
24	416	20.6	348	4	PCT-US93-08528-13	Sequence 13, Appl
25	411	20.3	590	2	US-09-538-092-967	Sequence 967, App
26	406	20.1	590	2	US-09-826-509-517	Sequence 517, App
27	405.5	20.0	515	2	US-09-688-415-10	Sequence 10, Appl
28	402.5	19.9	513	1	US-08-406-855A-21	Sequence 21, Appl
29	402.5	19.9	513	2	US-09-206-899-21	Sequence 21, Appl
30	402.5	19.9	515	1	US-08-444-734A-7	Sequence 7, Appli
31	402.5	19.9	515	1	US-08-406-855A-22	Sequence 22, Appl
32	402.5	19.9	515	2	US-09-206-899-22	Sequence 22, Appl
33	400.5	19.8	515	1	US-08-722-001-25	Sequence 25, Appl
34	400.5	19.8	515	2	US-09-688-415-9	Sequence 9, Appli
35	399.5	19.7	517	1	US-08-467-568-10	Sequence 10, Appl
36	399.5	19.7	517	1	US-09-030-582-10	Sequence 10, Appl
37	399.5	19.7	520	1	US-08-334-698-4	Sequence 4, Appli
38	399.5	19.7	520	1	US-08-228-932-4	Sequence 4, Appli
39	399.5	19.7	520	1	US-08-468-939-4	Sequence 4, Appli
40	399.5	19.7	520	1	US-08-406-855A-4	Sequence 4, Appli
41	399.5	19.7	520	1	US-08-722-190-4	Sequence 4, Appli
42	399.5	19.7	520	2	US-08-244-354-4	Sequence 4, Appli
43	399.5	19.7	520	2	US-09-206-899-4	Sequence 4, Appli
44	399.5	19.7	520	2	US-09-444-783-4	Sequence 4, Appli
45	399.5	19.7	520	2	US-09-688-415-4	Sequence 4, Appli

ALIGNMENTS

RESULT 1
US-09-414-010-2
; Sequence 2, Application US/09414010
; Patent No. 6204017
; GENERAL INFORMATION:
; APPLICANT: Behan, Jiang Xu
; APPLICANT: Hedrick, Joseph A.
; APPLICANT: Laz, Thomas M.
; APPLICANT: Monsma, Frederick J. Jr.
; APPLICANT: Morse, Kelley L.
; APPLICANT: Umland, Shelby P.
; APPLICANT: Wang, Suke
; TITLE OF INVENTION: Histamine receptor
; FILE REFERENCE: CN01069
; CURRENT APPLICATION NUMBER: US/09/414,010
; CURRENT FILING DATE: 1999-10-07
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 390
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-414-010-2

Query Match 100.0%; Score 2024; DB 2; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.1e-159;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
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Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 2
US-09-812-216-2
; Sequence 2, Application US/09812216
; Patent No. 6613533
; GENERAL INFORMATION:
;  APPLICANT: Behan, Jiang Xu
;  APPLICANT:  Hedrick, Joseph A.
;  APPLICANT:  Laz, Thomas M.
;  APPLICANT:  Monsma, Frederick J. Jr.
;  APPLICANT:  Morse, Kelley L.
;  APPLICANT:  Umland, Shelby P.
;  APPLICANT:  Wang, Suke
;  TITLE OF INVENTION: Histamine receptor
;  FILE REFERENCE: CN01069
;  CURRENT APPLICATION NUMBER: US/09/812,216
;  CURRENT FILING DATE:  2001-03-19
;  PRIOR APPLICATION NUMBER: 09/414,010
;  PRIOR FILING DATE: 1999-10-07
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-812-216-2

  Query Match           100.0%;  Score 2024;  DB 2;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.1e-159;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
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Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
              ||||||||||||||||||||||||||||||
Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 3
US-09-875-076-14
; Sequence 14, Application US/09875076
; Patent No. 6869776
; GENERAL INFORMATION:
;  APPLICANT: Chen, Ruoping
;  APPLICANT:  Dang, Huong T.
;  APPLICANT:  Liaw, Chen W.
;  APPLICANT:  Lin, I-Lin
;  TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors
;  FILE REFERENCE: AREN0050
;  CURRENT APPLICATION NUMBER: US/09/875,076
;  CURRENT FILING DATE:  2001-06-06
;  PRIOR APPLICATION NUMBER: 09/417,044
;  PRIOR FILING DATE: 1999-10-12
;  PRIOR APPLICATION NUMBER: 60/120,416
;  PRIOR FILING DATE: 1999-02-16
;  PRIOR APPLICATION NUMBER: 60/121,851
;  PRIOR FILING DATE: 1999-02-26
;  PRIOR APPLICATION NUMBER: 60/123,946
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,949
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/136,436
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,437
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,439
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,567
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/137,127
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/137,131
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/141,448
;  PRIOR FILING DATE: 1999-06-29
;  PRIOR APPLICATION NUMBER: 60/156,653
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,633
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,555
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,634
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/157,280
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,294
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,281
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,293
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,282
;  PRIOR FILING DATE: 1999-10-01
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-875-076-14

  Query Match           100.0%;  Score 2024;  DB 2;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.1e-159;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        181 LEPVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390

Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 4
US-10-453-106-2
; Sequence 2, Application US/10453106
; Patent No. 6906060
; GENERAL INFORMATION:
; APPLICANT: Peschke, Bernd
; APPLICANT: Hohlweg, Rolf
; TITLE OF INVENTION: SUBSTITUTED HEXAHYDROPYRROLO[1,2-A]PYRAZINES,
; TITLE OF INVENTION: OCTAHYDROPYRIDO[1,2-A]PYRAZINES AND
; TITLE OF INVENTION: DECAHYDROPYRAZINO[1,2-A]AZEPINES
; FILE REFERENCE: 6483.200-US
; CURRENT APPLICATION NUMBER: US/10/453,106
; CURRENT FILING DATE: 2003-06-03
; PRIOR APPLICATION NUMBER: US 60/387,047
; PRIOR FILING DATE: 2002-06-07
; PRIOR APPLICATION NUMBER: Danish Application no. PA 2002 00863
; PRIOR FILING DATE: 2002-06-06
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 445
; TYPE: PRT
; ORGANISM: Monkey
US-10-453-106-2

Query Match 36.1%; Score 730; DB 2; Length 445;
Best Local Similarity 39.2%; Pred. No. 1.7e-52;
Matches 168; Conservative 47; Mismatches 132; Indels 82; Gaps 10;

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Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70

Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129

Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGNT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181

Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205

Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAGGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH------------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQ 253

Db        266 HGEAMPLHRYGVGEAAAGAEAGETALGGGGGGGSAASPTSSSGSSSRGTERPRSLKRGSK 325

Qy        254 RRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFA 313

Db        326 PSASSASLEKRMKMVSQ-------SFTQ----------RFRLSRDRKVAKSLAVIVSIFG 368

Qy        314 VCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIF 373

Db        369 LCWAPYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLL 427
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Qy        374 C---IKKQP 379

Db        428 CPQKLKIQP 436
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RESULT 5
US-09-165-543-5
; Sequence 5, Application US/09165543
; Patent No. 6093545
; GENERAL INFORMATION:
; APPLICANT: Andrew D.J. Goodearl and Sandra Glucksman
; TITLE OF INVENTION: Muscarinic Receptors and Uses Therefor
; NUMBER OF SEQUENCES: 39
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: LAHIVE & COCKFIELD, LLP
; STREET: 28 State Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/165,543
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/042,780
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Elizabeth A. Hanley
; REGISTRATION NUMBER: 33,505
; REFERENCE/DOCKET NUMBER: MNI-032CP
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)227-7400
; TELEFAX: (617)742-4214
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 445 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-165-543-5

Query Match 36.0%; Score 729; DB 2; Length 445;
Best Local Similarity 39.1%; Pred. No. 2e-52;
Matches 166; Conservative 54; Mismatches 131; Indels 74; Gaps 10;

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Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70

Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129

Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181

Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205

Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257

Db        266 HGEAMPLHRYGVGEAGPGVEAGEAALGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
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Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGRCIP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 6
US-09-891-053-25
; Sequence 25, Application US/09891053
; Patent No. 6750322
; GENERAL INFORMATION:
;  APPLICANT: Itadani, Hiraku
;  APPLICANT:  Takimura, Tetsuo
;  APPLICANT:  Nakamura, Takao
;  APPLICANT:  Kobayashi, Masahiko
;  APPLICANT:  Tanaka, Ken-ichi
;  APPLICANT:  Hidaka, Yusuke
;  APPLICANT:  Ohta, Masataka
;  TITLE OF INVENTION: NOVEL GUANOSINE TRIPHOSPHATE (GTP)
;  TITLE OF INVENTION:  BINDING PROTEIN-COUPLED RECEPTOR PROTEINS
;  FILE REFERENCE: 06501-083001
;  CURRENT APPLICATION NUMBER: US/09/891,053
;  CURRENT FILING DATE:  2001-09-17
;  PRIOR APPLICATION NUMBER: PCT/JP99/07280
;  PRIOR FILING DATE: 1999-12-24
;  PRIOR APPLICATION NUMBER: PCT/JP98/05967
;  PRIOR FILING DATE: 1998-12-25
;  PRIOR APPLICATION NUMBER: JP 11/145661
;  PRIOR FILING DATE: 1999-05-25
;  NUMBER OF SEQ ID NOS: 26
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 25
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Rattus norvegicus
US-09-891-053-25

  Query Match             36.0%;  Score 729;  DB 2;  Length 445;
  Best Local Similarity   39.1%;  Pred. No. 2e-52;
  Matches  166;  Conservative   54;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :||||||:|||| | :|| :::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |  |||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   | | :
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |      |         ||: |  : : | |  |  :|  | | |:       |   |
Db        266 HGEAMPLHRYGVGEAGPGVEAGEAALGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGRCIP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 7
US-10-453-106-3
; Sequence 3, Application US/10453106
; Patent No. 6906060
; GENERAL INFORMATION:
;  APPLICANT: Peschke, Bernd
;  APPLICANT:  Hohlweg, Rolf
;  TITLE OF INVENTION: SUBSTITUTED HEXAHYDROPYRROLO[1,2-A]PYRAZINES,
;  TITLE OF INVENTION:  OCTAHYDROPYRIDO[1,2-A]PYRAZINES AND
;  TITLE OF INVENTION:  DECAHYDROPYRAZINO[1,2-A]AZEPINES
;  FILE REFERENCE: 6483.200-US
;  CURRENT APPLICATION NUMBER: US/10/453,106
;  CURRENT FILING DATE:  2003-06-03
;  PRIOR APPLICATION NUMBER: US 60/387,047
;  PRIOR FILING DATE: 2002-06-07
;  PRIOR APPLICATION NUMBER: Danish Application no. PA 2002 00863
;  PRIOR FILING DATE: 2002-06-06
;  NUMBER OF SEQ ID NOS: 3
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 3
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Rat
US-10-453-106-3

  Query Match             36.0%;  Score 729;  DB 2;  Length 445;
  Best Local Similarity   39.1%;  Pred. No. 2e-52;
  Matches  166;  Conservative   54;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :||||||:|||| | :|| :::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |  |||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   | | :
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |      |         ||: |  : : | |  |  :|  | | |:       |   |
Db        266 HGEAMPLHRYGVGEAGPGVEAGEAALGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
Db        373 PYTLLMIIRAACHGRCIP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 8
US-08-985-090-2
; Sequence 2, Application US/08985090
; Patent No. 5885893
;  GENERAL INFORMATION:
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;    APPLICANT:  Andrew D.J. Goodearl
;    TITLE OF INVENTION:  MUSCARINIC RECEPTORS AND USES THEREFOR
;    NUMBER OF SEQUENCES:  28
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD, LLP
;      STREET:  28 State Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/985,090
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jean M. Silveri
;      REGISTRATION NUMBER:  39,030
;      REFERENCE/DOCKET NUMBER:  MNI-032
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)227-7400
;      TELEFAX:  (617)742-4214
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  445 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-985-090-2

  Query Match             35.8%;  Score 724;  DB 1;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :|||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||:.|||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |: |||||||: || ||   ||:         ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |   |          |  |  : : |    | ::|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | |::|||||::: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:|||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKIQP 436
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RESULT 9
US-09-165-543-2
; Sequence 2, Application US/09165543
; Patent No. 6093545
;  GENERAL INFORMATION:
;    APPLICANT:  Andrew D.J. Goodearl and Sandra Glucksman
;    TITLE OF INVENTION:  Muscarinic Receptors and Uses Therefor
;    NUMBER OF SEQUENCES:  39
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD, LLP
;      STREET:  28 State Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/165,543
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  09/042,780
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Elizabeth A. Hanley
;      REGISTRATION NUMBER:  33,505
;      REFERENCE/DOCKET NUMBER:  MNI-032CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)227-7400
;      TELEFAX:  (617)742-4214
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  445 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-165-543-2

  Query Match             35.8%;  Score 724;  DB 2;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :|||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||: |||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |: |||||||: || ||   ||:         ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAILSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |   |          |  |  : : |    | ::|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | |::|||||::: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:|||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431
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Qy        375 IKKQP 379
              :| ||
Db        432 LKIQP 436


RESULT 10
US-09-167-354-7
; Sequence 7, Application US/09167354A
; Patent No. 6136559
; GENERAL INFORMATION:
;  APPLICANT: Lovenberg, Timothy
;  APPLICANT: Erlander, Mark
;  APPLICANT: Pyati, Jayashree
;  APPLICANT: Huvar, Arne
;  TITLE OF INVENTION: DNA ENCODING A HUMAN HISTAMINE RECEPTOR OF THE H3
;  TITLE OF INVENTION: SUBTYPE
;  FILE REFERENCE: JWW
;  CURRENT APPLICATION NUMBER: US/09/167,354A
;  CURRENT FILING DATE: 1998-10-07
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:PEPTIDE
US-09-167-354-7

  Query Match             35.8%;  Score 724;  DB 2;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :     ||  |:|:  | :|||||:|||| | :|| ::::| ||||||||  ||    ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY----------------------------------WSLWKRD 205
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Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |          |  |  : : |     | ::|  | | |:        |    |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | |::|||||::: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :      |  ||  :||| | || |||:|||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKIQP 436


RESULT 11
US-09-642-855-7
; Sequence 7, Application US/09642855
; Patent No. 6413743
; GENERAL INFORMATION:
;  APPLICANT: Lovenberg, Timothy
;  APPLICANT: Erlander, Mark
;  APPLICANT: Pyati, Jayashree
;  APPLICANT: Huvar, Arne
;  TITLE OF INVENTION: DNA ENCODING A HUMAN HISTAMINE RECEPTOR OF THE H3
;  TITLE OF INVENTION:  SUBTYPE
;  FILE REFERENCE: JWW
;  CURRENT APPLICATION NUMBER: US/09/642,855
;  CURRENT FILING DATE:  2000-08-21
;  PRIOR APPLICATION NUMBER: 09/167,354
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:PEPTIDE
US-09-642-855-7

  Query Match             35.8%;  Score 724;  DB 2;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :     ||  |:|:  | :|||||:|||| | :|| ::::| ||||||||  ||    ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY----------------------------------WSLWKRD 205
              ||  | : | :||::||                                  |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |          |  |  : : |     | ::|  | | |:        |    |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | |::|||||::: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :      |  ||  :||| | || |||:|||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKIQP 436


RESULT 12
US-09-642-514-7
; Sequence 7, Application US/09642514
; Patent No. 6437100
; GENERAL INFORMATION:
;  APPLICANT: Lovenberg, Timothy
;  APPLICANT:  Erlander, Mark
;  APPLICANT:  Pyati, Jayashree
;  APPLICANT:  Huvar, Arne
;  TITLE OF INVENTION: DNA ENCODING A HUMAN HISTAMINE RECEPTOR OF THE H3
;  TITLE OF INVENTION:  SUBTYPE
;  FILE REFERENCE: ORT1290
;  CURRENT APPLICATION NUMBER: US/09/642,514
;  CURRENT FILING DATE:  2000-08-21
;  PRIOR APPLICATION NUMBER: US 09/167,354
;  PRIOR FILING DATE: 1998-10-06
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;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:PEPTIDE
US-09-642-514-7

  Query Match             35.8%;  Score 724;  DB 2;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              |  :    ||  |:|:  | :|||||:|||| | :|| :::: | |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                     |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |       |  |  : : |    | ::|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | |::|||||::: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
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Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKIQP 436


RESULT 13
US-09-642-852-7
; Sequence 7, Application US/09642852
; Patent No. 6855560
; GENERAL INFORMATION:
;  APPLICANT: Lovenberg, Timothy
;  APPLICANT:  Erlander, Mark
;  APPLICANT:  Pyati, Jayashree
;  APPLICANT:  Huvar, Arne
;  TITLE OF INVENTION: DNA ENCODING A HUMAN HISTAMINE RECEPTOR OF THE H3
;  TITLE OF INVENTION:  SUBTYPE
;  FILE REFERENCE: JWW
;  CURRENT APPLICATION NUMBER: US/09/642,852
;  CURRENT FILING DATE:  2000-08-21
;  PRIOR APPLICATION NUMBER: 09/167,354
;  PRIOR FILING DATE: 1998-10-07
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:PEPTIDE
US-09-642-852-7

  Query Match             35.8%;  Score 724;  DB 2;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              |  :    ||  |:|:  | :|||||:|||| | :|| :::: | |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                     |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |       |       |  |  : : |    | ::|  | | |:       |    |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
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Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
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Qy        375 IKKQP 379
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Db        432 LKIQP 436


RESULT 14
US-10-453-106-1
; Sequence 1, Application US/10453106
; Patent No. 6906060
; GENERAL INFORMATION:
;  APPLICANT: Peschke, Bernd
;  APPLICANT:  Hohlweg, Rolf
;  TITLE OF INVENTION: SUBSTITUTED HEXAHYDROPYRROLO[1,2-A]PYRAZINES,
;  TITLE OF INVENTION:  OCTAHYDROPYRIDO[1,2-A]PYRAZINES AND
;  TITLE OF INVENTION:  DECAHYDROPYRAZINO[1,2-A]AZEPINES
;  FILE REFERENCE: 6483.200-US
;  CURRENT APPLICATION NUMBER: US/10/453,106
;  CURRENT FILING DATE:  2003-06-03
;  PRIOR APPLICATION NUMBER: US 60/387,047
;  PRIOR FILING DATE: 2002-06-07
;  PRIOR APPLICATION NUMBER: Danish Application no. PA 2002 00863
;  PRIOR FILING DATE: 2002-06-06
;  NUMBER OF SEQ ID NOS: 3
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-10-453-106-1

  Query Match             35.8%;  Score 724;  DB 2;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 5.2e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
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Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149
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Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY---------------------------------WSLWKRD 205
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
Db        432 LKIQP 436
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RESULT 15
US-09-949-016-10930
; Sequence 10930, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10930
;   LENGTH: 449
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-10930

  Query Match             35.8%;  Score 724;  DB 2;  Length 449;
  Best Local Similarity   38.6%;  Pred. No. 5.3e-52;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
Db         34 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 93

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
Db         94 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 153

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
Db        154 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 209

Qy        182 EFVIPVILVAYFNMNIY---------------------------------WSLWKRD 205
Db        210 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 269

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
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Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
Db        323 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 376

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
Db        377 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 435

Qy        375 IKKQP 379
Db        436 LKIQP 440
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Job time : 49 secs

OM protein - protein search, using sw model

Run on: March 28, 2006, 13:59:30 ; Search time 166 Seconds
(without alignments)
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Title: US-10-616-088-2
Perfect score: 2024
Sequence: 1 MPDTNSTINLSLSTRVTLAF.....KIFCIKKQPLPSQHSRSVSS 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_Main:*
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2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2024	100.0	390	3	US-09-812-216-2	Sequence 2, Appli
2	2024	100.0	390	3	US-09-910-411-2	Sequence 2, Appli
3	2024	100.0	390	3	US-09-875-076-14	Sequence 14, Appl
4	2024	100.0	390	3	US-09-876-252-14	Sequence 14, Appl
5	2024	100.0	390	3	US-09-852-165-2	Sequence 2, Appli
6	2024	100.0	390	3	US-09-891-138A-6	Sequence 6, Appli
7	2024	100.0	390	4	US-10-052-193-2	Sequence 2, Appli
8	2024	100.0	390	4	US-10-225-567A-629	Sequence 629, App
9	2024	100.0	390	4	US-10-272-983-14	Sequence 14, Appl
10	2024	100.0	390	4	US-10-354-769-2	Sequence 2, Appli
11	2024	100.0	390	4	US-10-393-807-14	Sequence 14, Appl
12	2024	100.0	390	4	US-10-417-820A-14	Sequence 14, Appl
13	2024	100.0	390	4	US-10-349-253A-2	Sequence 2, Appli
14	2024	100.0	390	4	US-10-696-673-2	Sequence 2, Appli
15	2024	100.0	390	4	US-10-723-955-14	Sequence 14, Appl
16	2024	100.0	390	4	US-10-782-596-14	Sequence 14, Appl
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18	2024	100.0	390	5	US-10-626-445-2	Sequence 2, Appli
19	2024	100.0	390	5	US-10-684-206-20	Sequence 20, Appl
20	2024	100.0	390	5	US-10-616-088-2	Sequence 2, Appli
21	2024	100.0	390	5	US-10-626-126-2	Sequence 2, Appli
22	2024	100.0	390	5	US-10-626-398-2	Sequence 2, Appli
23	2024	100.0	390	5	US-10-756-149-4702	Sequence 4702, Ap
24	2024	100.0	390	5	US-10-723-955-14	Sequence 14, Appl
25	2024	100.0	390	5	US-10-488-421-8	Sequence 8, Appli
26	2008	99.2	390	4	US-10-290-078-27	Sequence 27, Appl
27	2008	99.2	390	5	US-10-488-421-6	Sequence 6, Appli
28	1815.5	89.7	357	5	US-10-488-421-4	Sequence 4, Appli
29	1671	82.6	336	5	US-10-488-421-2	Sequence 2, Appli
30	1403.5	69.3	391	5	US-10-626-445-9	Sequence 9, Appli
31	1403.5	69.3	391	5	US-10-626-126-9	Sequence 9, Appli
32	1403.5	69.3	391	5	US-10-626-398-9	Sequence 9, Appli
33	1370.5	67.7	391	5	US-10-626-445-8	Sequence 8, Appli
34	1370.5	67.7	391	5	US-10-626-126-8	Sequence 8, Appli
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36	1308.5	64.6	389	5	US-10-626-445-10	Sequence 10, Appl
37	1308.5	64.6	389	5	US-10-626-126-10	Sequence 10, Appl
38	1308.5	64.6	389	5	US-10-626-398-10	Sequence 10, Appl
39	772	38.1	441	4	US-10-398-036-3	Sequence 3, Appli
40	730	36.1	415	5	US-10-495-679A-8	Sequence 8, Appli
41	730	36.1	445	4	US-10-453-106-2	Sequence 2, Appli
42	730	36.1	445	5	US-10-735-963-2	Sequence 2, Appli
43	729	36.0	445	3	US-09-891-053-25	Sequence 25, Appl
44	729	36.0	445	3	US-09-350-206-5	Sequence 5, Appli
45	729	36.0	445	3	US-09-349-755-5	Sequence 5, Appli

ALIGNMENTS

RESULT 1
US-09-812-216-2
; Sequence 2, Application US/09812216
; Publication No. US20020098539A1
; GENERAL INFORMATION:
; APPLICANT: Behan, Jiang Xu
; APPLICANT: Hedrick, Joseph A.
; APPLICANT: Laz, Thomas M.
; APPLICANT: Monsma, Frederick J. Jr.
; APPLICANT: Morse, Kelley L.
; APPLICANT: Umland, Shelby P.
; APPLICANT: Wang, Suke
; TITLE OF INVENTION: Histamine receptor
; FILE REFERENCE: CN01069
; CURRENT APPLICATION NUMBER: US/09/812,216
; CURRENT FILING DATE: 2001-03-19
; PRIOR APPLICATION NUMBER: 09/414,010
; PRIOR FILING DATE: 1999-10-07
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 390
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-812-216-2

Query Match 100.0%; Score 2024; DB 3; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.4e-173;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 2
US-09-910-411-2
; Sequence 2, Application US/09910411
; Patent No. US20020137054A1
; GENERAL INFORMATION:
;  APPLICANT: Bergsma, Derk
;  APPLICANT:  Fitzgerald, Laura
;  APPLICANT:  Li, Xiatong
;  APPLICANT:  Michalovich, David
;  APPLICANT:  Zhu, Yuan
;  TITLE OF INVENTION: AXOR35, A G-Protein Coupled Receptor
;  FILE REFERENCE: GP70655-2C1
;  CURRENT APPLICATION NUMBER: US/09/910,411
;  CURRENT FILING DATE:  2001-07-20
;  PRIOR APPLICATION NUMBER: 09/693,761
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 09/497,790
;  PRIOR FILING DATE: 2000-02-03
;  PRIOR APPLICATION NUMBER: 09/431,898
;  PRIOR FILING DATE: 1999-11-02
;  NUMBER OF SEQ ID NOS: 2
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapien
US-09-910-411-2

  Query Match           100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
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Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 3
US-09-875-076-14
; Sequence 14, Application US/09875076
; Publication No. US20030017528A1
; GENERAL INFORMATION:
;  APPLICANT: Chen, Ruoping
;  APPLICANT:  Dang, Huong T.
;  APPLICANT:  Liaw, Chen W.
;  APPLICANT:  Lin, I-Lin
;  TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors
;  FILE REFERENCE: AREN0050
;  CURRENT APPLICATION NUMBER: US/09/875,076
;  CURRENT FILING DATE:  2001-06-06
;  PRIOR APPLICATION NUMBER: 09/417,044
;  PRIOR FILING DATE: 1999-10-12
;  PRIOR APPLICATION NUMBER: 60/120,416
;  PRIOR FILING DATE: 1999-02-16
;  PRIOR APPLICATION NUMBER: 60/121,851
;  PRIOR FILING DATE: 1999-02-26
;  PRIOR APPLICATION NUMBER: 60/123,946
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,949
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/136,436
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,437
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,439
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,567
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/137,127
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/137,131
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/141,448
;  PRIOR FILING DATE: 1999-06-29
;  PRIOR APPLICATION NUMBER: 60/156,653
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,633
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,555
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,634
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/157,280
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,294
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,281
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,293
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,282
;  PRIOR FILING DATE: 1999-10-01
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-875-076-14

  Query Match           100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
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Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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RESULT 4
US-09-876-252-14
; Sequence 14, Application US/09876252
; Publication No. US20030018182A1
; GENERAL INFORMATION:
;  APPLICANT: Behan, Dominic P.
;  APPLICANT:  Lehmann-Bruinsma, Karin
;  APPLICANT:  Chalmers, Derek T.
;  APPLICANT:  Lowitz, Kevin P.
;  APPLICANT:  Lin, I-Lin
;  APPLICANT:  Dang, Huong T.
;  APPLICANT:  Chen, Ruoping
;  APPLICANT:  Liaw, Chen W.
;  TITLE OF INVENTION: Non-Endogenous Constitively Activated Human G Protein Coupled Rec
;  FILE REFERENCE: AREN-0054
;  CURRENT APPLICATION NUMBER: US/09/876,252
;  CURRENT FILING DATE:  2001-06-07
;  PRIOR APPLICATION NUMBER: 09/416,760
;  PRIOR FILING DATE: 1999-10-12
;  PRIOR APPLICATION NUMBER: 09/170,496
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: 60/110,060
;  PRIOR FILING DATE: 1998-11-27
;  PRIOR APPLICATION NUMBER: 60/120,416
;  PRIOR FILING DATE: 1999-02-16
;  PRIOR APPLICATION NUMBER: 60/121,852
;  PRIOR FILING DATE: 1999-02-26
;  PRIOR APPLICATION NUMBER: 60/109,213
;  PRIOR FILING DATE: 1998-11-20
;  PRIOR APPLICATION NUMBER: 60/123,944
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,945
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;  PRIOR APPLICATION NUMBER: 60/123,946
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;  PRIOR APPLICATION NUMBER: 60/152,524
;  PRIOR FILING DATE: 1999-09-03
;  PRIOR APPLICATION NUMBER: 60/151,114
;  PRIOR FILING DATE: 1999-08-27
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;  PRIOR APPLICATION NUMBER: 60/136,436
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;  PRIOR APPLICATION NUMBER: 60/137,127
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;  PRIOR APPLICATION NUMBER: 60/137,131
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;  PRIOR APPLICATION NUMBER: 60/141,448
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;  PRIOR APPLICATION NUMBER: 60/156,555
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;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/156,653
;  PRIOR FILING DATE: 1999-09-29
;  PRIOR APPLICATION NUMBER: 60/157,280
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,294
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,281
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/157,282
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: 60/156,633
;  PRIOR FILING DATE: 1999-09-29
;  NUMBER OF SEQ ID NOS: 146
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 14
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-876-252-14

  Query Match           100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
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Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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RESULT 5
US-09-852-165-2
; Sequence 2, Application US/09852165
; Publication No. US20030032784A1
; GENERAL INFORMATION:
;  APPLICANT: Lind, Peter
;  APPLICANT:  Sejlitz, Torsten
;  APPLICANT:  Vogeli, Gabriel
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;  APPLICANT:  Wood, Linda S.
;  TITLE OF INVENTION: No. US20030032784A1el G Protein-Coupled Receptors
;  FILE REFERENCE: 00231regUS
;  CURRENT APPLICATION NUMBER: US/09/852,165
;  CURRENT FILING DATE:  2001-05-08
;  PRIOR APPLICATION NUMBER: USSN 60/203,108
;  PRIOR FILING DATE: 2000-05-08
;  NUMBER OF SEQ ID NOS: 3
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-852-165-2

  Query Match           100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
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Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
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Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
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Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 6
US-09-891-138A-6
; Sequence 6, Application US/09891138A
; Publication No. US20030083245A1
; GENERAL INFORMATION:
;  APPLICANT: Lin, Daniel Chi-Hong
;  APPLICANT:  Zhao, Jiagang
;  APPLICANT:  Chen, Jin-Long
;  APPLICANT:  Cutler, Gene
;  APPLICANT:  Tularik Inc.
;  TITLE OF INVENTION: No. US20030083245A1el Receptors
;  FILE REFERENCE: 018781-006210US
;  CURRENT APPLICATION NUMBER: US/09/891,138A
;  CURRENT FILING DATE:  2001-06-25
;  PRIOR APPLICATION NUMBER: US 60/213,461
;  PRIOR FILING DATE: 2000-06-23
;  NUMBER OF SEQ ID NOS: 26
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: human TGR62 G-protein coupled receptor (GPCR)
US-09-891-138A-6

  Query Match           100.0%;  Score 2024;  DB 3;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 7
US-10-052-193-2
; Sequence 2, Application US/10052193
; Publication No. US20020132755A1
; GENERAL INFORMATION:
;  APPLICANT: Pfizer, Inc.
;  TITLE OF INVENTION: HISTAMINE RECEPTOR ANTAGONISTS
;  FILE REFERENCE: PC10963A
;  CURRENT APPLICATION NUMBER: US/10/052,193
;  CURRENT FILING DATE:  2002-01-17
;  PRIOR APPLICATION NUMBER: 0101223.6
;  PRIOR FILING DATE: 2001-01-17
;  NUMBER OF SEQ ID NOS: 10
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-052-193-2

  Query Match           100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
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Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
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Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 8
US-10-225-567A-629
; Sequence 629, Application US/10225567A
; Publication No. US20030113798A1
; GENERAL INFORMATION:
;  APPLICANT: LifeSpan Biosciences
;  APPLICANT:  Brown, Joseph P.
;  APPLICANT:  Burmer, Glenna C.
;  APPLICANT:  Roush, Christine L.
;  TITLE OF INVENTION: ANTIGENIC PEPTIDES AND ANTIBODIES FOR G PROTEIN-COUPLED RECEPTORS
;  FILE REFERENCE: 1920-4-4
;  CURRENT APPLICATION NUMBER: US/10/225,567A
;  CURRENT FILING DATE:  2001-12-19
;  PRIOR APPLICATION NUMBER: 60/257,144
;  PRIOR FILING DATE: 2000-12-19
;  NUMBER OF SEQ ID NOS: 2292
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 629
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-225-567A-629

  Query Match           100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 9
US-10-272-983-14
; Sequence 14, Application US/10272983
; Publication No. US20030148450A1
; GENERAL INFORMATION:
;  APPLICANT: Chen, Ruoping
;  APPLICANT:  Dang, Huong T.
;  APPLICANT:  Liaw, Chen W.
;  APPLICANT:  Lin, I-Lin
;  TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors
;  FILE REFERENCE: AREN0050
;  CURRENT APPLICATION NUMBER: US/10/272,983
;  CURRENT FILING DATE:  2002-10-17
;  PRIOR APPLICATION NUMBER: US/09/417,044
;  PRIOR FILING DATE: 1999-10-12
;  PRIOR APPLICATION NUMBER: 60/109,213
;  PRIOR FILING DATE: 1998-11-20
;  PRIOR APPLICATION NUMBER: 60/120,416
;  PRIOR FILING DATE: 1999-02-16
;  PRIOR APPLICATION NUMBER: 60/121,851
;  PRIOR FILING DATE: 1999-02-26
;  PRIOR APPLICATION NUMBER: 60/123,946
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,949
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/136,436
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,437
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,439
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,567
;  PRIOR FILING DATE: 1999-05-28
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-272-983-14

  Query Match           100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 10
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US-10-354-769-2
; Sequence 2, Application US/10354769
; Publication No. US20030149242A1
; GENERAL INFORMATION:
;  APPLICANT: Pfizer Inc.
;  APPLICANT:  O'Reilly, Mark A.
;  APPLICANT:  Peter, Beate
;  TITLE OF INVENTION: NOVEL POLYPEPTIDE
;  FILE REFERENCE: PC10373B
;  CURRENT APPLICATION NUMBER: US/10/354,769
;  CURRENT FILING DATE:  2003-01-30
;  PRIOR APPLICATION NUMBER: US 09/698,801
;  PRIOR FILING DATE: 2000-10-27
;  PRIOR APPLICATION NUMBER: US 60/211,243
;  PRIOR FILING DATE: 2000-06-14
;  PRIOR APPLICATION NUMBER: GB 9925641.4
;  PRIOR FILING DATE: 1999-10-29
;  PRIOR APPLICATION NUMBER: GB 0009973.9
;  PRIOR FILING DATE: 2000-04-20
;  NUMBER OF SEQ ID NOS: 10
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-354-769-2

  Query Match             100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 11
US-10-393-807-14
; Sequence 14, Application US/10393807
; Publication No. US20030175891A1
; GENERAL INFORMATION:
;  APPLICANT: Chen, Ruoping
;  APPLICANT:  Dang, Huong T.
;  APPLICANT:  Liaw, Chen W.
;  APPLICANT:  Lin, I-Lin
;  TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors
;  FILE REFERENCE: AREN0050
;  CURRENT APPLICATION NUMBER: US/10/393,807
;  CURRENT FILING DATE:  2003-03-21
;  PRIOR APPLICATION NUMBER: US/09/417,044
;  PRIOR FILING DATE: 1999-10-12
;  PRIOR APPLICATION NUMBER: 60/109,213
;  PRIOR FILING DATE: 1998-11-20
;  PRIOR APPLICATION NUMBER: 60/120,416
;  PRIOR FILING DATE: 1999-02-16
;  PRIOR APPLICATION NUMBER: 60/121,851
;  PRIOR FILING DATE: 1999-02-26
;  PRIOR APPLICATION NUMBER: 60/123,946
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,949
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/136,436
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,437
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,439
;  PRIOR FILING DATE: 1999-05-28
;  PRIOR APPLICATION NUMBER: 60/136,567
;  PRIOR FILING DATE: 1999-05-28
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-393-807-14

  Query Match             100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Db        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240

Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
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Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Db        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390


RESULT 12
US-10-417-820A-14
; Sequence 14, Application US/10417820A
; Publication No. US20030229216A1
; GENERAL INFORMATION:
;  APPLICANT: Chen, Ruoping
;  APPLICANT:  Liaw, Chen W.
;  APPLICANT:  Lowitz, Kevin
;  APPLICANT:  Chalmers, Derek T.
;  APPLICANT:  Behan, Dominic P.
;  TITLE OF INVENTION: Constitutively Activated Human G Protein Coupled
```

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;  TITLE OF INVENTION:  Receptors
;  FILE REFERENCE: 7.US28.CON
;  CURRENT APPLICATION NUMBER: US/10/417,820A
;  CURRENT FILING DATE:  2003-04-16
;  PRIOR APPLICATION NUMBER: 09/416,760
;  PRIOR FILING DATE: 1999-10-12
;  PRIOR APPLICATION NUMBER: 09/170,496
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: 60/110,060
;  PRIOR FILING DATE: 1998-11-27
;  PRIOR APPLICATION NUMBER: 60/120,416
;  PRIOR FILING DATE: 1999-02-16
;  PRIOR APPLICATION NUMBER: 60/121,852
;  PRIOR FILING DATE: 1999-02-26
;  PRIOR APPLICATION NUMBER: 60/109,213
;  PRIOR FILING DATE: 1998-11-20
;  PRIOR APPLICATION NUMBER: 60/123,944
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,945
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,948
;  PRIOR FILING DATE: 1999-03-12
;  PRIOR APPLICATION NUMBER: 60/123,951
;  PRIOR FILING DATE: 1999-03-12
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 155
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 14
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-417-820A-14

  Query Match             100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 13
US-10-349-253A-2
; Sequence 2, Application US/10349253A
; Publication No. US20040043393A1
; GENERAL INFORMATION:
;  APPLICANT: Aubart, Kelly
;  APPLICANT:  Bergsma, Derk
;  APPLICANT:  Fitzgerald, Laura
;  APPLICANT:  Graybill, Todd
;  APPLICANT:  Li, Xiatong
;  APPLICANT:  Michalovich, David
;  APPLICANT:  Morrow, Dwight
;  APPLICANT:  Zhu, Yuan
;  TITLE OF INVENTION: AXOR35, A G-Protein Coupled Receptor
;  FILE REFERENCE: GP70655-2C2
;  CURRENT APPLICATION NUMBER: US/10/349,253A
;  CURRENT FILING DATE:  2003-01-21
;  PRIOR APPLICATION NUMBER: 09/910,411
;  PRIOR FILING DATE: 2001-07-20
;  PRIOR APPLICATION NUMBER: 09/693,761
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 09/497,790
;  PRIOR FILING DATE: 2000-02-03
;  PRIOR APPLICATION NUMBER: 09/431,898
;  PRIOR FILING DATE: 1999-11-02
;  NUMBER OF SEQ ID NOS: 2
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 390
;   TYPE: PRT
;   ORGANISM: Homo sapien
US-10-349-253A-2

  Query Match             100.0%;  Score 2024;  DB 4;  Length 390;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-173;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60
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Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120

Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Db        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180

Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
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Db        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300

Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Db        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360

Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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RESULT 14
US-10-696-673-2
; Sequence 2, Application US/10696673
; Publication No. US20040105846A1
; GENERAL INFORMATION:
;  APPLICANT: Pharmacia & Upjohn Company
;  APPLICANT:  Lind, Peter
;  APPLICANT:  Sejlitz, Torsen
;  APPLICANT:  Vogeli, Gabriel
;  APPLICANT:  Wood, Linda S
;  TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING G PROTEIN-COUPLED RECEPTORS
;  FILE REFERENCE: PHRM0025-101/00231REGUS.1 DV1
;  CURRENT APPLICATION NUMBER: US/10/696,673
;  CURRENT FILING DATE:  2003-10-28
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; PRIOR APPLICATION NUMBER: US 60/203,108
; PRIOR FILING DATE: 2000-05-08
; PRIOR APPLICATION NUMBER: US 09/852,165
; PRIOR FILING DATE: 2001-05-08
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 390
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-696-673-2

Query Match 100.0%; Score 2024; DB 4; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.4e-173;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 MPDTNSTINLSLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAIS 60

Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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RESULT 15
US-10-723-955-14
; Sequence 14, Application US/10723955
; Publication No. US20040110238A1
; GENERAL INFORMATION:
; APPLICANT: Behan, Dominic P.
; APPLICANT: Chalmers, Derek T.
; APPLICANT: Lin, I-Lin
; APPLICANT: Liaw, Chen W.
; APPLICANT: Lehman-Bruinsma, Karin
; APPLICANT: Lowitz, Kevin P.
; APPLICANT: Dang, Huong T.
; APPLICANT: Chen, Ruoping
; APPLICANT: Gore, Martin
; APPLICANT: White, Carol
; TITLE OF INVENTION: Constitutively Activated Human G Protein Coupled
; TITLE OF INVENTION: Receptors
; FILE REFERENCE: 7.US29.CON
; CURRENT APPLICATION NUMBER: US/10/723,955
; CURRENT FILING DATE: 2003-11-26
; PRIOR APPLICATION NUMBER: 10/417,820
; PRIOR FILING DATE: 2003-4-16
; PRIOR APPLICATION NUMBER: 09/416,760
; PRIOR FILING DATE: 1999-10-12
; PRIOR APPLICATION NUMBER: 09/170,496
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: 60/110,060
; PRIOR FILING DATE: 1998-11-27
; PRIOR APPLICATION NUMBER: 60/120,416
; PRIOR FILING DATE: 1999-02-16
; PRIOR APPLICATION NUMBER: 60/121,852
; PRIOR FILING DATE: 1999-02-26
; PRIOR APPLICATION NUMBER: 60/109,213
; PRIOR FILING DATE: 1998-11-20
; PRIOR APPLICATION NUMBER: 60/123,944
; PRIOR FILING DATE: 1999-03-12
; PRIOR APPLICATION NUMBER: 60/123,945
; PRIOR FILING DATE: 1999-03-12
; PRIOR APPLICATION NUMBER: 60/123,948
; PRIOR FILING DATE: 1999-03-12
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 14
; LENGTH: 390
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-723-955-14

Query Match 100.0%; Score 2024; DB 4; Length 390;
Best Local Similarity 100.0%; Pred. No. 1.4e-173;
Matches 390; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 DFFVGVISIPLYIPHTLFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAV 120
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Qy        121 SYRTQHTGVLKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPGFFSEWYILAITSF 180
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Qy        181 LEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSA 240
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Qy        241 STEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARR 300
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Qy        301 LAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPL 360
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Qy        361 CHKRFQKAFLKIFCIKKQPLPSQHSRSVSS 390
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Search completed: March 28, 2006, 14:03:02
Job time : 167 secs

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: March 28, 2006, 14:00:25 ; Search time 24 Seconds
(without alignments)
479.284 Million cell updates/sec

Title: US-10-616-088-2
Perfect score: 2024
Sequence: 1 MPDTNSTINLSLSTRVTLAF.....KIFCIKKQPLPSQHSRSVSS 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 174695 seqs, 29494374 residues

Total number of hits satisfying chosen parameters: 174695

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /SIDS5/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
2: /SIDS5/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
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7: /SIDS5/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
8: /SIDS5/ptodata/1/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	772	38.1	441	7	US-11-241-956-3	Sequence 3, Appli
2	730	36.1	445	7	US-11-115-564-2	Sequence 2, Appli
3	729	36.0	445	7	US-11-115-564-3	Sequence 3, Appli
4	724	35.8	445	7	US-11-115-564-1	Sequence 1, Appli
5	411	20.3	590	7	US-11-124-368A-183	Sequence 183, App
6	411	20.3	590	7	US-11-127-877-54	Sequence 54, Appl
7	397.5	19.6	532	7	US-11-127-877-42	Sequence 42, Appl
8	386	19.1	466	7	US-11-127-877-41	Sequence 41, Appl
9	384.5	19.0	480	6	US-10-521-162-40	Sequence 40, Appl
10	377.5	18.7	429	7	US-11-127-877-51	Sequence 51, Appl
11	377.5	18.7	466	7	US-11-127-877-50	Sequence 50, Appl
12	375	18.5	353	6	US-10-875-716-10	Sequence 10, Appl
13	372	18.4	487	7	US-11-249-847-582	Sequence 582, App
14	348.5	17.2	400	6	US-10-499-210-2	Sequence 2, Appli
15	344	17.0	350	7	US-11-165-024-3	Sequence 3, Appli
16	314.5	15.5	446	7	US-11-166-412-67	Sequence 67, Appl
17	314	15.5	345	7	US-11-174-816-15	Sequence 15, Appl
18	314	15.5	345	7	US-11-174-819-70	Sequence 70, Appl
19	313	15.5	712	6	US-10-521-162-12	Sequence 12, Appl
20	310	15.3	365	6	US-10-875-716-9	Sequence 9, Appli
21	300.5	14.8	475	6	US-10-877-346-48	Sequence 48, Appl
22	299.5	14.8	345	7	US-11-174-751-16	Sequence 16, Appl
23	298	14.7	345	7	US-11-174-816-59	Sequence 59, Appl
24	298	14.7	345	7	US-11-174-819-78	Sequence 78, Appl
25	296	14.6	345	7	US-11-174-816-44	Sequence 44, Appl
26	296	14.6	345	7	US-11-174-819-13	Sequence 13, Appl
27	294.5	14.6	471	6	US-10-995-561-901	Sequence 901, App
28	291	14.4	348	7	US-11-174-751-12	Sequence 12, Appl
29	288	14.2	269	7	US-11-151-482-5	Sequence 5, Appli
30	285	14.1	477	6	US-10-877-346-47	Sequence 47, Appl
31	282.5	14.0	347	7	US-11-174-816-57	Sequence 57, Appl
32	282.5	14.0	347	7	US-11-174-819-76	Sequence 76, Appl
33	282	13.9	457	6	US-10-877-346-49	Sequence 49, Appl
34	281.5	13.9	347	7	US-11-174-816-42	Sequence 42, Appl
35	281.5	13.9	347	7	US-11-174-819-9	Sequence 9, Appli
36	280	13.8	458	6	US-10-877-346-51	Sequence 51, Appl
37	279.5	13.8	332	7	US-11-174-816-39	Sequence 39, Appl
38	279.5	13.8	332	7	US-11-174-819-3	Sequence 3, Appli
39	279.5	13.8	349	7	US-11-174-751-22	Sequence 22, Appl
40	278.5	13.8	440	6	US-10-502-893-2.	Sequence 2, Appli
41	275	13.6	348	7	US-11-174-816-11	Sequence 11, Appl
42	275	13.6	348	7	US-11-174-816-48	Sequence 48, Appl
43	275	13.6	348	7	US-11-174-819-34	Sequence 34, Appl
44	274.5	13.6	481	7	US-11-090-439-16	Sequence 16, Appl
45	274.5	13.6	486	6	US-10-877-346-50	Sequence 50, Appl

ALIGNMENTS

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RESULT 1
US-11-241-956-3
; Sequence 3, Application US/11241956
; Publication No. US20060024792A1
; GENERAL INFORMATION:
;  APPLICANT: INCYTE GENOMICS INC.; BAUGHN, Mariah R.;
;  APPLICANT:  GRAUL Richard C.; CHAWLA, Narinder K.;
;  APPLICANT:  GANDHI, Ameena R.; HAFALIA, April J.A.;
;  APPLICANT:  RAMKUMAR, Jayalaxmi; TRIBOULEY, Catherine M.;
;  APPLICANT:  THORNTON, Michael B.; KALLICK, Deborah A.;
;  APPLICANT:  YAO, Monique G.; ELLIOTT, Vicki S.;
;  APPLICANT:  BURFORD, Neil; KHAN, Farrah A.;
;  APPLICANT:  YUE, Henry; LU, Yan;
;  APPLICANT:  ARVIZU, Chandra S.; ROOPA, Reddy M.;
;  APPLICANT:  NGUYEN, Danniel B.; LEE, Ernestine A.;
;  APPLICANT:  LU, Dyung Aina M.; ISON, Craig H.;
;  APPLICANT:  WALSH, Roderick T.; POLICKY, Jennifer L.
;  TITLE OF INVENTION: G-PROTEIN COUPLED RECEPTORS
;  FILE REFERENCE: PI-0236 USN
;  CURRENT APPLICATION NUMBER: US/11/241,956
;  CURRENT FILING DATE:  2005-10-04
;  PRIOR APPLICATION NUMBER: US/10/398,036
;  PRIOR FILING DATE: 2003-03-28
;  PRIOR APPLICATION NUMBER: PCT/US01/30661
;  PRIOR FILING DATE: 2001-09-28
;  PRIOR APPLICATION NUMBER: US 60/245,855
;  PRIOR FILING DATE: 2000-11-03
;  PRIOR APPLICATION NUMBER: US 60/242,322
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: US 60/240,589
;  PRIOR FILING DATE: 2000-10-13
;  PRIOR APPLICATION NUMBER: US 60/249,343
;  PRIOR FILING DATE: 2000-11-15
;  PRIOR APPLICATION NUMBER: US 60/247,587
;  PRIOR FILING DATE: 2000-11-09
;  PRIOR APPLICATION NUMBER: US 60/245,900
;  PRIOR FILING DATE: 2000-11-03
;  PRIOR APPLICATION NUMBER: US 60/242,223
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: US 60/236,546
;  PRIOR FILING DATE: 2000-09-29
;  NUMBER OF SEQ ID NOS: 32
;  SOFTWARE: PERL Program
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;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
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;   NAME/KEY: misc_feature
;   OTHER INFORMATION: Incyte ID No: 7474823CD1
US-11-241-956-3

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  Best Local Similarity   62.1%;  Pred. No. 3.5e-61;
  Matches  167;  Conservative   25;  Mismatches   43;  Indels   34;  Gaps    8;

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Qy        173 YILAITSFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPG-----LTAVSSNICGHS 227
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Qy        287 LHQREHVELLRARRLAKSLAILLGVFAVC 315
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RESULT 2
US-11-115-564-2
; Sequence 2, Application US/11115564
; Publication No. US20050267116A1
; GENERAL INFORMATION:
;  APPLICANT: Peschke, Bernd
;  APPLICANT:  Hohlweg, Rolf
;  TITLE OF INVENTION: SUBSTITUTED HEXAHYDROPYRROLO[1,2-A]PYRAZINES,
;  TITLE OF INVENTION:  OCTAHYDROPYRIDO[1,2-A]PYRAZINES AND
;  TITLE OF INVENTION:  DECAHYDROPYRAZINO[1,2-A]AZEPINES
;  FILE REFERENCE: 6483.200-US
;  CURRENT APPLICATION NUMBER: US/11/115,564
;  CURRENT FILING DATE:  2005-04-27
;  PRIOR APPLICATION NUMBER: US 60/387,047
;  PRIOR FILING DATE: 2002-06-07
;  PRIOR APPLICATION NUMBER: Danish Application no. PA 2002 00863
;  PRIOR FILING DATE: 2002-06-06
;  NUMBER OF SEQ ID NOS: 3
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Monkey
US-11-115-564-2

  Query Match            36.1%;  Score 730;  DB 7;  Length 445;
  Best Local Similarity   39.2%;  Pred. No. 1.9e-57;
  Matches  168;  Conservative   47;  Mismatches  132;  Indels   82;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :||||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGNT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAGGPEPPPEAQPSPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH------------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQ 253
              |    |               | ||:    | |      ||  | |  || | |     :
Db        266 HGEAMPLHRYGVGEAAAGAEAGETALGGGGGGGSAASPTSSSGSSSRGTERPRSLKRGSK 325

Qy        254 RRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFA 313
                 ||      | || |         ||:|             | | |::|||||::: :|
Db        326 PSASSASLEKRMKMVSQ-------SFTQ----------RFRLSRDRKVAKSLAVIVSIFG 368

Qy        314 VCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIF 373
              :|||||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |:
Db        369 LCWAPYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLL 427

Qy        374 C---IKKQP 379
              |   :| ||
Db        428 CPQKLKIQP 436


RESULT 3
US-11-115-564-3
; Sequence 3, Application US/11115564
; Publication No. US20050267116A1
; GENERAL INFORMATION:
;  APPLICANT: Peschke, Bernd
;  APPLICANT:  Hohlweg, Rolf
;  TITLE OF INVENTION: SUBSTITUTED HEXAHYDROPYRROLO[1,2-A]PYRAZINES,
;  TITLE OF INVENTION:  OCTAHYDROPYRIDO[1,2-A]PYRAZINES AND
;  TITLE OF INVENTION:  DECAHYDROPYRAZINO[1,2-A]AZEPINES
;  FILE REFERENCE: 6483.200-US
;  CURRENT APPLICATION NUMBER: US/11/115,564
;  CURRENT FILING DATE:  2005-04-27
;  PRIOR APPLICATION NUMBER: US 60/387,047
;  PRIOR FILING DATE: 2002-06-07
;  PRIOR APPLICATION NUMBER: Danish Application no. PA 2002 00863
;  PRIOR FILING DATE: 2002-06-06
;  NUMBER OF SEQ ID NOS: 3
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 3
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Rat
US-11-115-564-3

  Query Match            36.0%;  Score 729;  DB 7;  Length 445;
  Best Local Similarity   39.1%;  Pred. No. 2.4e-57;
  Matches  166;  Conservative   54;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              | :    ||  |:|:  | :||||||:|||| | :|| ::::| |||||||| ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||| :||:||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCASSVFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
              : |  |: |||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMALVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY-----------------------------------WSLWKRD 205
              ||  | : | :||::||                                   |  | :
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGGREAGPEPPPPDAQPSPPPAPPSCWGCWPKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |    |          ||: |  : : | |  |  :|  | | |:        |    |
Db        266 HGEAMPLHRYGVGEAGPGVEAGEAALGGGSGGGAAASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:  :| ::  :|   ||| :     :   | | :::||||||:: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSIT------QRFRLSRDKKVAKSLAIIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:||||||  |::|| |: |
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Db        373 PYTLLMIIRAACHGRCIP-DYWYETSFWLLWANSAVNPVLYPLCHYSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKVQP 436


RESULT 4
US-11-115-564-1
; Sequence 1, Application US/11115564
; Publication No. US20050267116A1
; GENERAL INFORMATION:
; APPLICANT: Peschke, Bernd
;  APPLICANT:  Hohlweg, Rolf
;  TITLE OF INVENTION: SUBSTITUTED HEXAHYDROPYRROLO[1,2-A]PYRAZINES,
;  TITLE OF INVENTION:  OCTAHYDROPYRIDO[1,2-A]PYRAZINES AND
;  TITLE OF INVENTION:  DECAHYDROPYRAZINO[1,2-A]AZEPINES
;  FILE REFERENCE: 6483.200-US
;  CURRENT APPLICATION NUMBER: US/11/115,564
;  CURRENT FILING DATE:  2005-04-27
;  PRIOR APPLICATION NUMBER: US 60/387,047
;  PRIOR FILING DATE: 2002-06-07
;  PRIOR APPLICATION NUMBER: Danish Application no. PA 2002 00863
;  PRIOR FILING DATE: 2002-06-06
;  NUMBER OF SEQ ID NOS: 3
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
;   LENGTH: 445
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-115-564-1

  Query Match             35.8%;  Score 724;  DB 7;  Length 445;
  Best Local Similarity   38.6%;  Pred. No. 6.6e-57;
  Matches  164;  Conservative   56;  Mismatches  131;  Indels   74;  Gaps   10;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
              |  :     ||  |:|:  | :|||||:|||| | :|| ::::| ||||||||  ||   ||
Db         30 SAAWTAVLAALMALLIVATVLGNALVMLAFVADSSLRTQNNFFLLNLAISDFLVGAFCIP 89

Qy         71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
              ||:|: |   | ||: :|  ||  ||||||:| :|||||||||:|||: ||||| |
Db         90 LYVPYVLTGRWTFGRGLCKLWLVVDYLLCTSSAFNIVLISYDRFLSVTRAVSYRAQQGDT 149

Qy        130 LKIVTLMVAVWVLAFLVNGPMILVSESWK--------DEGSECEPGFFSEWYILAITSFL 181
               : |  |: ||||||||: || ||   ||:          ||  |   ||  || |   | |
Db        150 RRAVRKMLLVWVLAFLLYGPAIL---SWEYLSGGSSIPEG-HCYAEFFYNWYFLITASTL 205

Qy        182 EFVIPVILVAYFNMNIY----------------------------------WSLWKRD 205
              ||  | : | :||::||                                  |  |::
Db        206 EFFTPFLSVTFFNLSIYLNIQRRTRLRLDGAREAAGPEPPPEAQPSPPPPPGCWGCWQKG 265

Qy        206 HLSRCQSH--------PGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSERQRRKS 257
              |      |        |  |  : :  |   | ::|  | | |:       |   |
Db        266 HGEAMPLHRYGVGEAAVGAEAGEATLGGGGGGGSVASPTSSSGSS-------SRGTERPR 318

Qy        258 SLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSLAILLGVFAVCWA 317
              ||   |:   :| ::  :|   ||| :      :   | | |::|||||::: :| :|||
Db        319 SLKRGSKPSASSASLEKRMKMVSQSFT------QRFRLSRDRKVAKSLAVIVSIFGLCWA 372

Qy        318 PYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFC--- 374
              ||:|  |: :       |   ||  :||| | || |||:|||||  |::|| |: |
Db        373 PYTLLMIIRAACHGHCVP-DYWYETSFWLLWANSAVNPVLYPLCHHSFRRAFTKLLCPQK 431

Qy        375 IKKQP 379
              :| ||
Db        432 LKIQP 436


RESULT 5
US-11-124-368A-183
; Sequence 183, Application US/11124368A
; Publication No. US20050287559A1
; GENERAL INFORMATION:
;  APPLICANT: Michele Cargill
;  APPLICANT:  James J. Devlin
;  APPLICANT:  May Luke
;  TITLE OF INVENTION: Genetic Polymorphisms Associated with
;  TITLE OF INVENTION:  Vascular Diseases, Methods of Detection and Uses Thereof
;  FILE REFERENCE: CL001524
;  CURRENT APPLICATION NUMBER: US/11/124,368A
;  CURRENT FILING DATE:  2005-05-09
;  PRIOR APPLICATION NUMBER: US 60/568,845
;  PRIOR FILING DATE: 2004-05-07
;  PRIOR APPLICATION NUMBER: US 60/625,936
;  PRIOR FILING DATE: 2004-11-09
;  NUMBER OF SEQ ID NOS: 21112
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 183
;   LENGTH: 590
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-124-368A-183

  Query Match             20.3%;  Score 411;  DB 7;  Length 590;
  Best Local Similarity   22.6%;  Pred. No. 6.9e-29;
  Matches  118;  Conservative   95;  Mismatches  150;  Indels  158;  Gaps   14;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
              | :||   ::|   ::|| |||::| |:| |:  ::|| |:|| :|  :||||: |:  :
Db         69 VFIAFLTGILALVTIIGNILVIVSFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 128

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
               :   |  |   |  ||  ||:   ||| |:::||:||| |::  ::|| : |   |
Db        129 IIMNRWALGNLACDLWLAIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRT--TKRAG 186

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
              :|: : ||::|::  | ||  : :  : :     ||   | ||  |   |:  | :|| :
Db        187 VMIGLAWVISFVLWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTI 246

Qy        190 VAYFNMNIYWSLWK---------------------------------------------- 203
              :     :|| ::|
Db        247 MTI----LYWRIYKETEKRTKELAGLQASGTEAETENFVHPTGSSRSCSSYELQQQSMKR 302

Qy        204 --RDHLSRC----------------QSHPGLTAVSSN---------------------- 222
                |    ||               | |    : ::|
Db        303 SNRRKYGRCHFWFTTKSWKPSSEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSETR 362

Qy        223 --------ICGHSF----------------------------RGRLSSRRSLSASTEVPA 246
                     : |||                            :| :::|:       |
Db        363 AIYSIVLKLPGHSTILNSTKLPSSDNLQVPEEELGMVDLERKADKLQAQKSVDDGGSFPK 422

Qy        247 SFHSERQRRKSSLMFSSRTKMNSN--------------TIASKMGSFSQSDSVALHQRE 291
              ||     : :|::  :  : :||:               |:| :    ::|    : :|:
Db        423 SFSKLPIQLESAVDTAKTSDVNSSVGKSTATLPLSFKEATLAKRFALKTRSQ---ITKRK 479

Qy        292 HVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNS 351
              : |:: :: |::|: :|  | : | ||::  :| :|  |   ||: |  : :|| : ||
Db        480 RMSLVKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFCDSCI-PKTFW-NLGYWLCYINS 537

Qy        352 FVNPLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
              |||: | ||:| |:  |  :    | ||:    |: :  |
Db        538 TVNPVCYALCNKTFRTTFKMLLLCQCDKKKRRKQQYQQRQS 578


RESULT 6
US-11-127-877-54
; Sequence 54, Application US/11127877
; Publication No. US20050287565A1
; GENERAL INFORMATION:
;  APPLICANT: Merchiers, Pascal G.
;  APPLICANT:  Hoffmann, Marcel
;  APPLICANT:  Spittaels, Koenraad F. F.
;  APPLICANT:  Laenen, Wendy
;  TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
;  TITLE OF INVENTION:  Amyloid-Beta Protein Production
```

```
;  FILE REFERENCE: P27,800-B USA
;  CURRENT APPLICATION NUMBER: US/11/127,877
;  CURRENT FILING DATE:  2005-05-12
;  PRIOR APPLICATION NUMBER: 60/570,352
;  PRIOR FILING DATE: 2004-05-12
;  PRIOR APPLICATION NUMBER: 60/603,948
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 590
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 54
;   LENGTH: 590
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-127-877-54

  Query Match             20.3%;  Score 411;  DB 7;  Length 590;
  Best Local Similarity   22.6%;  Pred. No. 6.9e-29;
  Matches  118;  Conservative   95;  Mismatches  150;  Indels  158;  Gaps   14;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
              | :||   ::|   ::|| |||::| |:| |:  ::|| |:|| :|  :||||: |:  :
Db         69 VFIAFLTGILALVTIIGNILVIVSFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTY 128

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
                :   |  |   |  ||  ||:   ||| |:::||:||| |::  ::|| : |   |
Db        129 IIMNRWALGNLACDLWLAIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRT--TKRAG 186

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
              :|: : ||::|::  | || : :  : :    ||   | ||  |   |:   | :|| :
Db        187 VMIGLAWVISFVLWAPAILFWQYFVGKRTVPPGECFIQFLSEPTITFGTAIAAFYMPVTI 246

Qy        190 VAYFNMNIYWSLWK---------------------------------------------- 203
              :     :|| ::|
Db        247 MTI----LYWRIYKETEKRTKELAGLQASGTEAETENFVHPTGSSRSCSSYELQQQSMKR 302

Qy        204 --RDHLSRC----------------QSHPGLTAVSSN---------------------- 222
                |    ||                | |    : ::|
Db        303 SNRRKYGRCHFWFTTKSWKPSSEQMDQDHSSSDSWNNNDAAASLENSASSDEEDIGSETR 362

Qy        223 --------ICGHSF----------------------------RGRLSSRRSLSASTEVPA 246
                    : |||                            :| :::|:      |
Db        363 AIYSIVLKLPGHSTILNSTKLPSSDNLQVPEEELGMVDLERKADKLQAQKSVDDGGSFPK 422

Qy        247 SFHSERQRRKSSLMFSSRTKMNSN---------------TIASKMGSFSQSDSVALHQRE 291
              ||     : :|::  :  : :||:               |:| :    ::|    : :|:
Db        423 SFSKLPIQLESAVDTAKTSDVNSSVGKSTATLPLSFKEATLAKRFALKTRSQ---ITKRK 479

Qy        292 HVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNS 351
              : |:: :: |::|: :|  | : | ||::  :| :|  |   ||: |  : :|| : ||
Db        480 RMSLVKEKKAAQTLSAILLAFIITWTPYNIMVLVNTFCDSCI-PKTFW-NLGYWLCYINS 537

Qy        352 FVNPLLYPLCHKRFQKAFLKIF---CIKKQPLPSQHSRSVS 389
              |||: | ||:| |:  |  :    | ||:    |: :  |
Db        538 TVNPVCYALCNKTFRTTFKMLLLCQCDKKKRRKQQYQQRQS 578


RESULT 7
US-11-127-877-42
; Sequence 42, Application US/11127877
; Publication No. US20050287565A1
; GENERAL INFORMATION:
;  APPLICANT: Merchiers, Pascal G.
;  APPLICANT:  Hoffmann, Marcel
;  APPLICANT:  Spittaels, Koenraad F. F.
;  APPLICANT:  Laenen, Wendy
;  TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
;  TITLE OF INVENTION:  Amyloid-Beta Protein Production
;  FILE REFERENCE: P27,800-B USA
;  CURRENT APPLICATION NUMBER: US/11/127,877
;  CURRENT FILING DATE:  2005-05-12
;  PRIOR APPLICATION NUMBER: 60/570,352
;  PRIOR FILING DATE: 2004-05-12
;  PRIOR APPLICATION NUMBER: 60/603,948
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 590
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 42
;   LENGTH: 532
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-127-877-42

  Query Match             19.6%;  Score 397.5;  DB 7;  Length 532;
  Best Local Similarity   22.6%;  Pred. No. 9.7e-28;
  Matches  110;  Conservative   90;  Mismatches  155;  Indels  131;  Gaps   14;

Qy         16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
              :|:|   ::|:   ::|| ||:::| |:  |:  ::|: |:|| :|  :|: |: ||  :
Db         31 ITIAAVTAVVSLITIVGNVLVMISFKVNSQLKTVNNYYLLSLACADLIIGIFSMNLYTTY 90

Qy         76 TLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
                |   |  |   |  ||  ||:   ||| |:::||:||| |::  ::|| : |   |
Db         91 ILMGRWALGSLACDLWLALDYVASNASVMNLLVISFDRYFSITRPLTYRAKRTP--KRAG 148

Qy        135 LMVAV-WVLAFLVNGPMILVSESWKDEGS----ECEPGFFSEWYILAITSFLEFVIPVIL 189
              :|: : |:::|::  | ||  :    : :    ||:  | ||  |   |:   | ||| :
Db        149 IMIGLAWLISFILWAPAILCWQYLVGKRTVPLDECQIQFLSEPTITFGTAIAAFYIPVSV 208

Qy        190 VAYFNMNIY---------------------------------------------------- 198
              :    ||
Db        209 MTILYCRIYRETEKRTKDLADLQGSDSVTKAEKRKPAHRALFRSCLRCPRPTLAQRERNQ 268

Qy        199 --WSL--------------------W-KRDHLSRCQSHPG----------------LTAV 219
                ||                    | | : |: | |:|                  :
Db        269 ASWSSSRRSTSTTGKPSQATGPSANWAKAEQLTTCSSYPSSEDEDKPATDPVLQVVYKSQ 328

Qy        220 SSNICGHSFRGRLSSRRSLSASTE-----------VPASFHSERQRRKSSLMFSSRTKMN 268
                |  |     :   : | ||              ||: |  : :: :  |    | :
Db        329 GKESPGEEFSAEETEETFVKAETEKSDYDTPNYLLSPAAAHRPKSQKCVAYKFRLVVKAD 388

Qy        269 SN----------------TIASKMGS--FSQSDSVALHQREHVELLRARRLAKSLAILL 309
                |                :| :  :    : : |  : :|: | |:: |: |::|: :|
Db        389 GNQETNNGCHKVKIMPCPFPVAKEPSTKGLNPNPSHQMTKRKRVVLVKERKAAQTLSAIL 448

Qy        310 GVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAF 369
              | : | ||::  :| :|       | ::|: : :|| : || |||: | ||:: |:| |
Db        449 LAFIITWTPYNIMVLVSTFCDKCV-PVTLWH-LGYWLCYVNSTVNPICYALCNRTFRKTF 506

Qy        370 -LKIFC 374
               : : |
Db        507 KMLLLC 512


RESULT 8
US-11-127-877-41
; Sequence 41, Application US/11127877
; Publication No. US20050287565A1
; GENERAL INFORMATION:
;  APPLICANT: Merchiers, Pascal G.
;  APPLICANT:  Hoffmann, Marcel
;  APPLICANT:  Spittaels, Koenraad F. F.
;  APPLICANT:  Laenen, Wendy
;  TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
;  TITLE OF INVENTION:  Amyloid-Beta Protein Production
;  FILE REFERENCE: P27,800-B USA
;  CURRENT APPLICATION NUMBER: US/11/127,877
;  CURRENT FILING DATE:  2005-05-12
;  PRIOR APPLICATION NUMBER: 60/570,352
;  PRIOR FILING DATE: 2004-05-12
;  PRIOR APPLICATION NUMBER: 60/603,948
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 590
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 41
;   LENGTH: 466
;   TYPE: PRT
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;   ORGANISM: Homo sapiens
US-11-127-877-41

  Query Match             19.1%;  Score 386;  DB 7;  Length 466;
  Best Local Similarity   24.1%;  Pred. No. 8.8e-27;
  Matches  110;  Conservative   96;  Mismatches  147;  Indels  104;  Gaps   17;

Qy           4 TNSTINLSLSTRVTLAFFMSLVAFAI----MLGNALVILAFVVDKNLRHRSSYFFLNLAI 59
               :|::: |:   :     |: ||| ::    ::|| ||::  |:::|:  ::||  :||
Db           8 SNNSLALTSPYKTFEVVFIVLVAGSLSLVTIIGNILVMVSIKVNRHLQTVNNYFLFSLAC 67

Qy          60 SDFFVGVISIPLYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSN 118
               :|  :|| |: ||  :|:   |  |  :|  ||  ||::  ||| |:::||:|||  |:
Db          68 ADLIIGVFSMNLYTLYTVIGYWPLGPVVCDLWLALDYVVSNASVMNLLIISFDRYFCVTK 127

Qy         119 AVSYRTQHTGVLKIVTLMV-AVWVLAFLVNGPMILVSESWK-------DEGSECEPGFFS 170
                ::|  : |   |:  :|: | |||:|::  | ||     |:         |  ||   |||
Db         128 PLTYPVKRT--TKMAGMMIAAAWVLSFILWAPAILF---WQFIVGVRTVEDGECYIQFFS 182

Qy         171 EWYILAITSFLEFVIPVILVAYFNMNIYWSLWK--RDHLSRCQSHPGLTAVSSNICGHSF 228
                :   |:   | :|||::      :|| : :  :  : : :  |   |    :
Db         183 NAAVTFGTAIAAFYLPVIIMTV----LYWHISRASKSRIKKDKKEP--VANQDPVSPSLV 236

Qy         229 RGRL-----------------------------------SSRRSLSASTEVPASF--- 248
               :||:                                  : | : || | |
Db         237 QGRIVKPNNNNMPSSDDGLEHNKIQNGKAPRDPVTENCVQGEEKESSNDSTSVSAVASNM 296

Qy         249 ----------------HSERQRRKSS-LMFSSRTKMN-----SNTIASKMGSFSQS--D 283
                             ||: :  | : :   ::|  :     :||    :||  |:  :
Db         297 RDDEITQDENTVSTSLGHSKDENSKQTCIRIGTKTPKSDSCTPTNTTVEVVGSSGQNGDE 356

Qy         284 SVALHQREHVELL-----------RARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSA 332
               :  |: |::           | ::: :::  :|  | : ||||::  :: :| :
Db         357 KQNIVARKIVKMTKQPAKKKPPPSREKKVTRTILAILLAFIITWAPYNVMVLINTFCAPC 416

Qy         333 TGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAF 369
                 | :||  | :|| : || :||  | ||:  |:| |
Db         417 I-PNTVW-TIGYWLCYINSTINPACYALCNATFKKTF 451


RESULT 9
US-10-521-162-40
; Sequence 40, Application US/10521162
; Publication No. US20050287529A1
; GENERAL INFORMATION:
;  APPLICANT: Brandt, Kevin S.
;  TITLE OF INVENTION: FLEA AND TICK OCTOPAMINE RECEPTOR NUCLEIC ACID MOLECULES,
;  TITLE OF INVENTION:  PROTEINS AND USES THEREOF
;  FILE REFERENCE: FC-11-PCT
;  CURRENT APPLICATION NUMBER: US/10/521,162
;  CURRENT FILING DATE:  2005-01-13
;  PRIOR APPLICATION NUMBER: 60/319,402
;  PRIOR FILING DATE: 2003-07-17
;  PRIOR APPLICATION NUMBER: 60/426,601
;  PRIOR FILING DATE: 2003-11-15
;  NUMBER OF SEQ ID NOS: 50
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 40
;   LENGTH: 480
;   TYPE: PRT
;   ORGANISM: Rhipicephalus sanguineus
US-10-521-162-40

  Query Match             19.0%;  Score 384.5;  DB 6;  Length 480;
  Best Local Similarity   25.9%;  Pred. No. 1.2e-26;
  Matches  115;  Conservative   67;  Mismatches  161;  Indels  101;  Gaps   13;

Qy          16 VTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPH 75
               | | | :  :   :: || |||:| :    ||  ::|| ::||::|  ||:  :|  |
Db          20 VALFFVLGSINGLVIFGNLLVIIAVLASTKLRTVTNYFVVSLAVADLSVGLTVLPYSIVL 79

Qy          76 TLFE-WDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVT 134
                 : | | ||   |  ||  |  |||:|: |:  || ||||::  | ||:  :   :
Db          80 EVLEVWIFGHTWCQIWLAVDVWLCTSSILNLCAISVDRYLAITRPVRYRSLMSS-RRAKL 138

Qy         135 LMVAVWVLAFLVNGPMILVSESWKDEGSE-------------------------CEPG-- 167
               |:|||||:||::  | ::    | | ||:                        |:
Db         139 LIVAVWVIAFVICFPPLV---GWNDGGSQNSVPYHGSNETLHNSSIAADGPLPLCKSAQC 195

Qy         168 --FFSEWYILAITSFLEFVIPVILVAYFNMNIYWS------------------------- 200
                  :: |::  ::   | ||:: : :||  || :
Db         196 VLINNKGYVI-YSALGSFYIPMLFMLFFNYRIYRAAIQTGRALERGPITTKSGKIKGRTT 254

Qy         201 ---LWKRDH--------LSRCQSHPGL-TAVSSNICGHSFRGRLSSRRSLSAST------ 242
                  | | |          |  | |  | :  : |    |  ||   |||
Db         255 DQRLTLRVHRGNDSAMNAKRGSEHLGAETCIDGIVTGRRRPGLKKSRDEPSASARSSASK 314

Qy         243 -----------EVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQRE 291
                         | || | |   ::|          |  ::  |   | |    ||
Db         315 TRQQSDQRTTRSAPPSFKSNRGSARNS---------GRNGTSTSSGGGKGSRSSKRSQRW 365

Qy         292 HVELLRAR-RLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFN 350
                 :  |   :  |::  ::| |  || |:   :| :|        :: : : ||| : |
Db         366 QAKRFRTEAKATKTVGTIVGGFICCWLPFFTVYLVRAFCEHCI--PNLLFSVFFWLGYCN 423

Qy         351 SFVNPLLYPLCHKRFQKAFLKIFC 374
               | :|||:| |  | |: || :| |
Db         424 SAINPLIYVLVSKDFRLAFKRILC 447


RESULT 10
US-11-127-877-51
; Sequence 51, Application US/11127877
; Publication No. US20050287565A1
; GENERAL INFORMATION:
;  APPLICANT: Merchiers, Pascal G.
;  APPLICANT:  Hoffmann, Marcel
;  APPLICANT:  Spittaels, Koenraad F. F.
;  APPLICANT:  Laenen, Wendy
;  TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
;  TITLE OF INVENTION:  Amyloid-Beta Protein Production
;  FILE REFERENCE: P27,800-B USA
;  CURRENT APPLICATION NUMBER: US/11/127,877
;  CURRENT FILING DATE:  2005-05-12
;  PRIOR APPLICATION NUMBER: 60/570,352
;  PRIOR FILING DATE: 2004-05-12
;  PRIOR APPLICATION NUMBER: 60/603,948
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 590
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 51
;   LENGTH: 429
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-127-877-51

  Query Match             18.7%;  Score 377.5;  DB 7;  Length 429;
  Best Local Similarity   27.6%;  Pred. No. 4.6e-26;
  Matches  110;  Conservative   73;  Mismatches  129;  Indels   87;  Gaps   20;

Qy          10 LSLSTRVTLAFFM-SLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVIS 68
               :::|  : |   :  |: | : ||| ||||:    ::|   : |: :|||::|  :
Db          21 VNISKAILLGVILGGLILFGV-LGNILVILSVACHRHLHSVTHYYIVNLAVADLLLTSTV 79

Qy          69 IPLYIPHTLFE----WDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYR- 123
               :|     :||    | ||:  |  |   | | ||||:  : :|| |||: ||  : |
Db          80 LPF---SAIFEVLGYWAFGRVFCNIWAAVDVLCCTASIMGLCIISIDRYIGVSYPLRYPT 136

Qy         124 --TQHTGVLKIVTLMVAVWVLAFLVN-GPMILVSESWKDEGSE----C----EPGFFSEW 172
                 ||  |::     :: || |: ::: ||:      |:    |    |    |||
Db         137 IVTQRRGLM----ALLCVWALSLVISIGPLF----GWRQPAPEDETICQINEEPG----- 183

Qy         173 YIL--AITSFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRG 230
               |:|  |: ||    : :||| |  : :                              :    ||
Db         184 YVLFSALGSFY-LPLAIILVMYCRVYV-------------------------VAKRESRG 217
```

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Qy        231 RLSS-RRSLSASTEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQ 289
Db        218 LKSGLKTDKSDSEQVTLRIHRKNAPAGGSGMASAKTKTHF--------------SVRL-- 261

Qy        290 REHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWF 349
Db        262 ---LKFSREKKAAKTLGIVVGCFVLCWLPFFLVMPIGSFFPDFK-PSETVFKIVFWLGYL 317

Qy        350 NSFVNPLLYPLCHKRFQKAF---LKIFCIKKQPLPSQHS 385
Db        318 NSCINPIIYPCSSQEFKKAFQNVLRIQCLRRKQ-SSKHA 355


RESULT 11
US-11-127-877-50
; Sequence 50, Application US/11127877
; Publication No. US20050287565A1
; GENERAL INFORMATION:
;  APPLICANT: Merchiers, Pascal G.
;  APPLICANT:  Hoffmann, Marcel
;  APPLICANT:  Spittaels, Koenraad F. F.
;  APPLICANT:  Laenen, Wendy
;  TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
;  TITLE OF INVENTION:  Amyloid-Beta Protein Production
;  FILE REFERENCE: P27,800-B USA
;  CURRENT APPLICATION NUMBER: US/11/127,877
;  CURRENT FILING DATE:  2005-05-12
;  PRIOR APPLICATION NUMBER: 60/570,352
;  PRIOR FILING DATE: 2004-05-12
;  PRIOR APPLICATION NUMBER: 60/603,948
;  PRIOR FILING DATE: 2004-08-24
;  NUMBER OF SEQ ID NOS: 590
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 50
;   LENGTH: 466
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-127-877-50

  Query Match             18.7%;  Score 377.5;  DB 7;  Length 466;
  Best Local Similarity   27.6%;  Pred. No. 5e-26;
  Matches  110;  Conservative   73;  Mismatches  129;  Indels   87;  Gaps   20;

Qy         10 LSLSTRVTLAFFM-SLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVIS 68
Db         21 VNISKAILLGVILGGLILFGV-LGNILVILSVACHRHLHSVTHYYIVNLAVADLLLTSTV 79

Qy         69 IPLYIPHTLFE----WDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYR- 123
Db         80 LPF---SAIFEVLGYWAFGRVFCNIWAAVDVLCCTASIMGLCIISIDRYIGVSYPLRYPT 136

Qy        124 --TQHTGVLKIVTLMVAVWVLAFLVN-GPMILVSESWKDEGSE----C----EPGFFSEW 172
Db        137 IVTQRRGLM----ALLCVWALSLVISIGPLF----GWRQPAPEDETICQINEEPG----- 183

Qy        173 YIL--AITSFLEFVIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRG 230
Db        184 YVLFSALGSFY-LPLAIILVMYCRVYV-------------------------VAKRESRG 217

Qy        231 RLSS-RRSLSASTEVPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQ 289
Db        218 LKSGLKTDKSDSEQVTLRIHRKNAPAGGSGMASAKTKTHF--------------SVRL-- 261

Qy        290 REHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWF 349
Db        262 ---LKFSREKKAAKTLGIVVGCFVLCWLPFFLVMPIGSFFPDFK-PSETVFKIVFWLGYL 317

Qy        350 NSFVNPLLYPLCHKRFQKAF---LKIFCIKKQPLPSQHS 385
Db        318 NSCINPIIYPCSSQEFKKAFQNVLRIQCLRRKQ-SSKHA 355


RESULT 12
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US-10-875-716-10
; Sequence 10, Application US/10875716
; Publication No. US20050266522A1
; GENERAL INFORMATION:
;  APPLICANT: Li et al.
;  TITLE OF INVENTION: Human Amine Receptor
;  FILE REFERENCE: PF188D1C2
;  CURRENT APPLICATION NUMBER: US/10/875,716
;  CURRENT FILING DATE:  2004-06-25
;  PRIOR APPLICATION NUMBER: US 09/988,745
;  PRIOR FILING DATE: 2001-11-20
;  PRIOR APPLICATION NUMBER: US 09/314,006
;  PRIOR FILING DATE: 1999-05-19
;  PRIOR APPLICATION NUMBER: US 08/467,559
;  PRIOR FILING DATE: 1995-06-06
;  NUMBER OF SEQ ID NOS: 10
; SEQ ID NO 10
;   LENGTH: 353
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-875-716-10

  Query Match             18.5%;  Score 375;  DB 6;  Length 353;
  Best Local Similarity   26.4%;  Pred. No. 6.1e-26;
  Matches   97;  Conservative   79;  Mismatches  135;  Indels   56;  Gaps   10;

Qy         19 AFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP--LYIPHT 76
Db         29 ATLLTLLIAVIVFGNVLVCMAVSREKALQTTTNYLIVSLAVADLLVATLVMPWVVYL-EV 87

Qy         77 LFEWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVTLM 136
Db         88 VGEWKFSRIHCDIFVTLDVMMCTASILNLCAISIDRYTAVAMPMLYNTRYSSKRRVTVMI 147

Qy        137 VAVWVLAFLVNGPMIL-VSESWKDEGSECEPGFFSEWYILAITSFLEFVIPVILVAYFNM 195
Db        148 SIVWVLSFTISCPLLFGLNNADQNECIIANPAF------VVYSSIVSFYVPFIVTLLVYI 201

Qy        196 NIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRS---LSASTEVPASFHSER 252
Db        202 KIYIVLRRR-----------------------RKRVNTKRSSRAFRAHLRAPLKEAARR 237

Qy        253 QRR-------KSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAKSL 305
Db        238 EKNGHAKDHPKIAKIFEIQTMPNGKT----------RTSLKTMSRRKLSQQKEKKATQML 287

Qy        306 AILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRF 365
Db        288 AIVLGVFIICWLPF-FITHILNIHCDCNIP-PVLYSAFTWLGYVNSAVNPIIYTTFNIEF 345

Qy        366 QKAFLKI 372
Db        346 RKAFLKI 352


RESULT 13
US-11-249-847-582
; Sequence 582, Application US/11249847
; Publication No. US20060035270A1
; GENERAL INFORMATION:
;  APPLICANT: Lee, Frank D.
;  APPLICANT:  Meng, Dr. Xun
;  APPLICANT:  Chan, John W.
;  APPLICANT:  Zhang, Shengsheng
;  APPLICANT:  Benkovic, Stephen J.
;  TITLE OF INVENTION: UNIQUE RECOGNITION SEQUENCES AND METHODS OF USE THEREOF IN
;  TITLE OF INVENTION:  PROTEIN ANALYSIS
;  FILE REFERENCE: BPTM-P05-001
;  CURRENT APPLICATION NUMBER: US/11/249,847
;  CURRENT FILING DATE:  2005-10-12
;  PRIOR APPLICATION NUMBER: 10/436,549
;  PRIOR FILING DATE: 2003-05-12
;  PRIOR APPLICATION NUMBER: 60/379,626
```

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;  PRIOR FILING DATE: 2002-05-10
;  PRIOR APPLICATION NUMBER: 60/393,137
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/393,197
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/393,211
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/393,223
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/393,233
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/393,235
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/393,280
;  PRIOR FILING DATE: 2002-07-01
;  PRIOR APPLICATION NUMBER: 60/430,948
;  PRIOR FILING DATE: 2002-12-04
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 614
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 582
;   LENGTH: 487
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-249-847-582

  Query Match             18.4%;  Score 372;  DB 7;  Length 487;
  Best Local Similarity   23.0%;  Pred. No. 1.6e-25;
  Matches  107;  Conservative   85;  Mismatches  159;  Indels  114;  Gaps   14;

Qy         18 LAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIPLYIPHTL 77
Db         30 LVVVLSTICLVTVGLNLLVLYAVRSERKLHTVGNLYIVSLSVADLIVGAVVMPMNILYLL 89

Qy         78 F-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGVLKIVTLM 136
Db         90 MSKWSLGRPLCLFWLSMDYVASTASIFSVFILCIDRYRSVQQPLRYLKYRTKTRASATIL 149

Qy        137 VAVWVLAFLVNGPMI----LVSESWKDEGSECEPGFFSEWYILAITSFLEFVIPVILVAY 192
Db        150 GA-WFLSFLWVIPILGWNHFMQQTSVRREDKCETDFYDVTWFKVMTAIINFYLPTLLMLW 208

Qy        193 FNMNIYWSLWKRDHLSRCQ-------SHPGLTAVS---SNICGHSFR-GR---------- 231
Db        209 FYAKIYKAV--RQH---CQHRELINRSLPSFSEIKLRPENPKGDAKKPGKESPWEVLKRK 263

Qy        232 ---------LSSRRSLSASTEVPASFHSERQRRKSSLMF--------------SSR---- 264
Db        264 PKDAGGGSVLKSPSQTPKEMKSPVVFSQEDDREVDKLYCFPLDIVHMQAAAEGSSRDYVA 323

Qy        265 -------------------TKMNSNTIASKMGSFSQSDS-------------------- 284
Db        324 VNRSHGQLKTDEQGLNTHGASEISEDQMLGDSQSFSRTDSDTTTETAPGKGKLRSGSNTG 383

Qy        285 ----------VALHQREHVELL---RARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSS 331
Db        384 LDYIKFTWKRLRSHSRQYVSGLHMNRERKAAKQLGFIMAAFILCWIPYFIFFMVIAFCKN 443

Qy        332 ATGPKSVWYRIAFWLQWFNSFVNPLLYPLCHKRFQKAFLKIFCIK 376
Db        444 CCNEHLHMFTI--WLGYINSTLNPLIYPLCNENFKKTFKRILHIR 486


RESULT 14
US-10-499-210-2
; Sequence 2, Application US/10499210
; Publication No. US20060052435A1
; GENERAL INFORMATION:
;  APPLICANT: Pfizer Limited and Pfizer, Inc.
;  TITLE OF INVENTION: Compounds for the Treatment of Sexual
;  TITLE OF INVENTION:  Dysfunction
;  FILE REFERENCE: PC22046A
;  CURRENT APPLICATION NUMBER: US/10/499,210
;  CURRENT FILING DATE:  2004-06-14
;  PRIOR APPLICATION NUMBER: GB 0130219.9
;  PRIOR FILING DATE: 2001-12-18
;  NUMBER OF SEQ ID NOS: 5
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 400
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-499-210-2

  Query Match             17.2%;  Score 348.5;  DB 6;  Length 400;
  Best Local Similarity   28.9%;  Pred. No. 1.6e-23;
  Matches  111;  Conservative   66;  Mismatches  140;  Indels   67;  Gaps   14;

Qy         28 AIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP--LYIPHTLFEWDFGKE 85
Db         42 AIVFGNGLVCMAVLKERALQTTTNYLVVSLAVADLLVATLVMPWVVYLEVTGGVWNFSRI 101

Qy         86 ICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYR--TQHTGVLKIVTLMVAVWVLA 143
Db        102 CCDVFVTLDVMMCTASILNLCAISIDRYTAVVMPVHYQHGTGQSSCRRVALMITAVWVLA 161

Qy        144 FLVNGPMILVSESWKDEG--SECEPGFFSEWYILAITSFLEFVIPVILVAYFNMNIYWSL 201
Db        162 FAVSCPLLFGFNTTGDPTVCSISNPDFVI--YSSVVSFYLPFGVTVLVYA----RIYVVL 215

Qy        202 WKRDHL-------SRCQS-HPGLTAVSSNICGHSFRGRLSSRRSLSASTEVPASFHSER- 252
Db        216 KQRRRKRILTRQNSQCNSVRPGF----------------PQQTLSPD---PAHLELKRY 255

Qy        253 --------------QRRKSSLMFSSRTKMN-SNTIASKM---------GSFSQSDSVALH 288
Db        256 YSICQDTALGGPGFQERGGELKREEKTRNSLSPTIAPKLSLEVRKLSNGRLSTSLKLGPL 315

Qy        289 QREHVELLRARRLAKSLAILLGVFAVCWAPYSLFTIVLSFYSSATGPKSVWYRIAFWLQW 348
Db        316 QPRGVP-LREKKATQMVAIVLGAFIVCWLPFFL-THVLNTHCQTCHVSPELYSATTWLGY 373

Qy        349 FNSFVNPLLYPLCHKRFQKAFLKI 372
Db        374 VNSALNPVIYTTFNIEFRKAFLKI 397


RESULT 15
US-11-165-024-3
; Sequence 3, Application US/11165024
; Publication No. US20050266527A1
; GENERAL INFORMATION:
;  APPLICANT: Li et al.
;  TITLE OF INVENTION: Human G-Protein Receptor HIBEF51
;  FILE REFERENCE: PF187D1C2
;  CURRENT APPLICATION NUMBER: US/11/165,024
;  CURRENT FILING DATE:  2005-06-24
;  PRIOR APPLICATION NUMBER: US 10/006,394
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 09/228,420
;  PRIOR FILING DATE: 1999-01-12
;  PRIOR APPLICATION NUMBER: US 08/465,971
;  PRIOR FILING DATE: 1995-06-06
;  NUMBER OF SEQ ID NOS: 9
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 3
;   LENGTH: 350
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-165-024-3

  Query Match             17.0%;  Score 344;  DB 7;  Length 350;
  Best Local Similarity   26.5%;  Pred. No. 3.5e-23;
  Matches   99;  Conservative   74;  Mismatches  131;  Indels   70;  Gaps   14;

Qy         11 SLSTRVTLAFFMSLVAFAIMLGNALVILAFVVDKNLRHRSSYFFLNLAISDFFVGVISIP 70
```

```
                ||   :||     |:    : || |||:|    : |:   : | ::|| :|  |  : ||
Db          29 SLQVTLTLVCLAGLLMLLTVFGNVLVIIAVFTSRALKAPQNLFLVSLASADILVATLVIP 88

Qy          71 LYIPHTLF-EWDFGKEICVFWLTTDYLLCTASVYNIVLISYDRYLSVSNAVSYRTQHTGV 129
                : : :   | |||  |  :|  | | ||:|: ::  || ||| |:: |: |  : |
Db          89 FSLANEVMGYWYFGKAWCEIYLALDVLFCTSSIVHLCAISLDRYWSITQAIEYNLKRT-P 147

Qy         130 LKIVTLMVAVWVLAFLVNGPMILVSESWKDEGSECEPG------FFSEWYILAITSFLEF 183
                :|  ::: |||:: ::: |  |:|   |  |   :|          :||::: :    |
Db         148 RRIKAIIITVWVISAVISFPP-LISIEKKGGGGGPQPAEPRCEINDQKWYVIS-SCIGSF 205

Qy         184 VIPVILVAYFNMNIYWSLWKRDHLSRCQSHPGLTAVSSNICGHSFRGRLSSRRSLSASTE 243
                | :::    : ||    :|  :    |  |  ||::   |   |||        :::
Db         206 FAPCLIMILVYVRIYQIAKRRTRVP--PSRRGPDAVAAPPGGLQGRGR--------SASG 255

Qy         244 VPASFHSERQRRKSSLMFSSRTKMNSNTIASKMGSFSQSDSVALHQREHVELLRARRLAK 303
                :|       ||::                |:  |:             | :|
Db         256 LP--------RRRA------------------GAGGQN-------------REKRFTF 274

Qy         304 SLAILLGVFAVCWAPYSLFTIVLSFYSSATG---PKSVWYRIAFWLQWFNSFVNPLLYPL 360
                ||:::||| ||| |:  ||  |    :| |   |::: ::  ||  : || :||::| :
Db         275 VLAVVIGVFVVCWFPF-FFTYTL----TAVGCSVPRTL-FKFFFWFGYCNSSLNPVIYTI 328

Qy         361 CHKRFQKAFLKIFC 374
                :  |::|| || |
Db         329 FNHDFRRAFKKILC 342


Search completed: March 28, 2006, 14:03:32
Job time : 25 secs
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